ORGANIZATIONAL AND INTERMEDIATE MAINTENANCE

DESCRIPTION AND PRINCIPLES OF OPERATION

A/P28S-32 PERSONNEL PARACHUTE ASSEMBLY

PART NO. MBEU147710, MBEU147710-1, MBEU147711, MBEU147712, MBEU147713, and MBEU148030

List of Effective Work Package Pages

Page No.	Chg. No.	Page No.	Chg. No.	Page No.	Chg. No.	Page No.	Chg. No.
1	10	2	6	3 thru 8	10		

Reference Material

Organizational and Intermediate Maintenance, Illustrated Parts Breakdown,
A/P28S-32 (V) 1 to 6 Personnel Parachute Assembly ..... WP 026 04

Alphabetical Index

Record of Applicable Technical Directives

Type/No.	Date	Title and ECP No.	Date Inc.	Rescission Date
ACC 629	11 Sept 97	SJU-17(V)1-A Canopy Breaker	1 Jun 98	31 Dec 2002

1. INTRODUCTION

a. The A/P28S-32 series of Personnel Maneuverable, Recovery Parachute assemblies are integral to the SJU-17 series of Aircrew Automated Ejection Seat Escape Systems.

b. There are five variants of the A/P28S-32 parachute assembly. Each variant is basically similar, the difference being confined to the shape and size of the canopy breakers on the parachute container (Table 1).

2. DESCRIPTION.

a. The parachute assembly comprises a GQ Parachutes Type 5000 aeroconical canopy, withdrawal line, deployment sleeve, suspension line stowage tray, and forward and aft risers. These items are packed into a rigid metal container closed by a metal lid assembly.

b. The 21 ft. inflated diameter, multi-colored (white, international orange, olive green and sand shade) nylon, aeroconical canopy is constructed of 20 gores. The canopy is modified with water deflation pockets on alternate gores and suspension lines. The canopy is stowed in a deployment sleeve which is attached to a withdrawal line. The withdrawal line is connected to the parachute deployment rocket motor when the assembly is installed on the seat.

c. The canopy has two Le-Moigne slots to provide diretional control and forward velocity on command. The Le-Moigne slots are located 180-degrees apart in gores 6 and 16, and are locked in the closed position by toggle and handle to ensure that the parachute descends vertically on initial opening. Directional control and forward velocity is initially selected by pulling down the two handles between the risers. This action unlocks the toggle from its loop securing the Le-Moigne slots in the closed position. Once the handle and toggle, securing the Le-Moigne slots, are pulled and the tension is released from the steering lines the Le-Moigne slots open and provide forward drive to the canopy. To turn the canopy, the aircrew pulls down on the appropriate steering line handle. Pulling down the left hand (LH) steering line handle will close the LH slot, turning the canopy left and vice versa. Pulling down both steering line handles simultaneously will close both slots, decreasing the forward velocity of the canopy.

d. The two steering lines consist of upper and lower portions. The upper portion is permanently attached to the rings of the Le-Moigne slots and is joined to the lower portion. The lower portion incorporates a handle and is temporarily secured between the front and rear harness risers by velcro fasteners.

e. Each parachute riser terminates at one end in a detachable connector link which attaches the suspension lines of the personnel parachute to the risers. At the other end, the front and rear risers connect to a canopy release fitting which connects with the male fitting of the aircrews PCU-33/P or PCU-56/P parachute restraint harness.

f. Connected to the canopy release fitting end of the risers are short straps which terminate in roller fittings, thru which the webbing straps of the shoulder harness reel are passed before the lugs are secured in the upper harness locks.

g. Two cross-connector straps, attached between the two front and two rear riser connector links, prevent the risers from spreading too far laterally on canopy extraction and opening. The straps also prevent total collapse of the canopy should one riser release fitting become detached from the PCU-33/P or PCU-56/P parachute restraint harness during parachute descent.

Table 1. Configuration Table of Parachute Assemblies

Parachute Assembly	Aircraft Type	Seat Position
A/P28S-32(V)1	F/A-18C T45A	Forward Aft
A/P28S-32(v)2	F/A-18D, E, F T45A	Forward Forward
A/P28S-32(V)3	F-14D	Forward
A/P28S-32(V)4	F-14D	Aft
A/P28S-32(V)6	F/A-18D, F	Aft

h. To restrain the risers to the front of the parachute container when exposed to the airstream, a riser retention strap, which has a lug at each end, is attached by a retaining loop sewn to the front face of the LH front riser. The strap passes across the front of the risers and the lugs engage in the harness reel upper locks to retain the risers to the seat until aircrew/seat separation occurs.

i. The parachute harness sensing release units (PHSRU) provide an automatic backup method of releasing the risers after the aircrew makes a sea water entry.

j. The aeroconical canopy is packed into a deployment sleeve assembly, which is then packed into a rigid container. The rigid container attaches to the upper forward face of the ejection seat and serves as a headrest for the aircrew.

k. The parachute container is constructed of a light alloy material and is fitted with canopy penetrators, rigid lid, and lid locking mechanism.

l. The PCU-33/P or PCU-56/P parachute restraint harness assembly integrates the aircrews parachute harness, lapbelt assembly, shoulder restraint harness, and torso vest.

m. When seated in the ejection seat, the aircrew connects the canopy release fittings on the risers to the fittings on the PCU-33/P or PCU-56/P parachute restraint harness assembly. The lapbelt release assemblies on the seat survival kit are connected to the lapbelt fittings on the PCU-33/P or PCU-56/P parachute restraint harness.

3. CONFIGURATION.

a. The general configuration of the A/P28S-32 parachute assembly is shown in Figure 1. Refer to WP 026 04 for detailed information on subassemblies.

4. SUBASSEMBLY CONFIGURATIONS.

a. The subassemblies listed below make up the personnel parachute assembly A/P28S-32 and are shown in (Figures 1 and 2).

Withdrawal Line Assembly

Deployment Sleeve Assembly

Canopy Assembly and Steering Lines

Suspension Line Stowage Tray

Riser Assembly and Cross Connector Straps

Parachute Harness Sensing Release Units

Lid Assembly

Personnel Parachute Container

5. PRINCIPLES OF OPERATION.

6. AUTOMATIC OPERATION - LOW SPEED/LOW ALTITUDE SEQUENCE (BELOW 8,000 FT.).

a. When an aircrew ejects from the aircraft in the low altitude/low speed sequence the following functions take place:

(1) The drogue deployment catapult fires and the drogue is deployed to extract the bridle, to stabilize and decelerate the seat.

(2) The drogue bridle is released, and the parachute deployment rocket motor fires, unlocking the container rigid lid and extending the withdrawal line.

(3) The withdrawal line withdraws the personnel parachute in it's sleeve and pulls the suspension lines and connector links from the suspension line stowage tray until the load is taken by the risers attached to the PCU-33/P or PCU-56/P parachute restraint harness.

(4) As the load is applied, the sleeve is drawn off the parachute canopy. The parachute canopy begins to inflate, the thread ties securing each pair of suspension line links break, and the canopy deploys fully.

(5) At the same time the harness release system operates and the aircrew separates from the seat between 0.65 and 1.50 seconds after initiation of the ejection sequence.

7. INTERMEDIATE ALTITUDE SEQUENCE (BETWEEN 8,000 AND 18,000 FT.).

a. The sequence is similar to the low speed/low altitude sequence described in Paragraph 6, except that aircrew/seat separation occurs 3.10 seconds after ejection initiation. This timing is applicable throughout the airspeed range of 0-700 KEAS between 8,000 and 18,000 feet.

8. HIGH ALTITUDE SEQUENCE (ABOVE 18,000 FT.).

a. When the aircrew ejects from the aircraft in the high altitude all speed sequence the following functions take place.

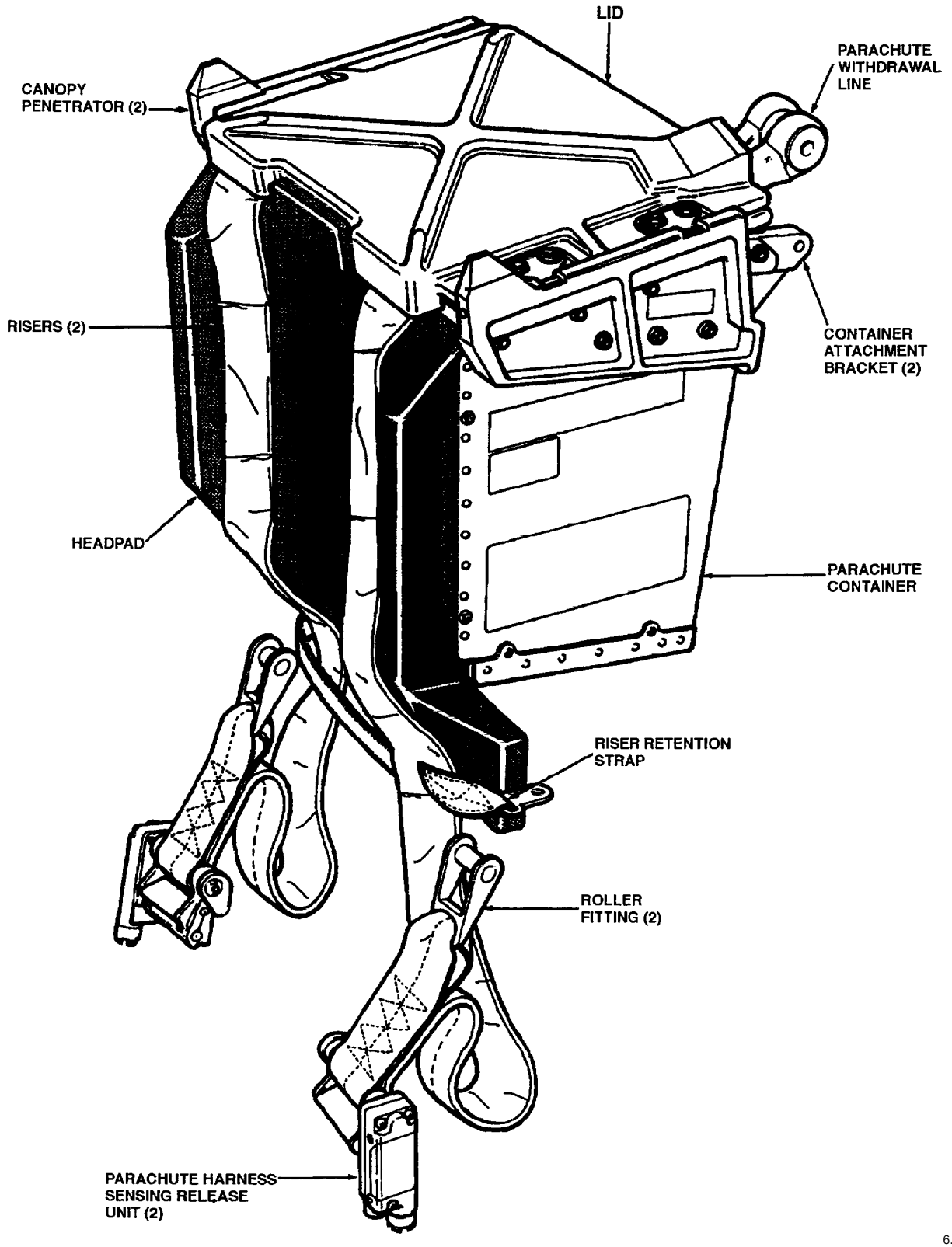

Figure 1. A/P28S-32 Personnel Parachute Assembly

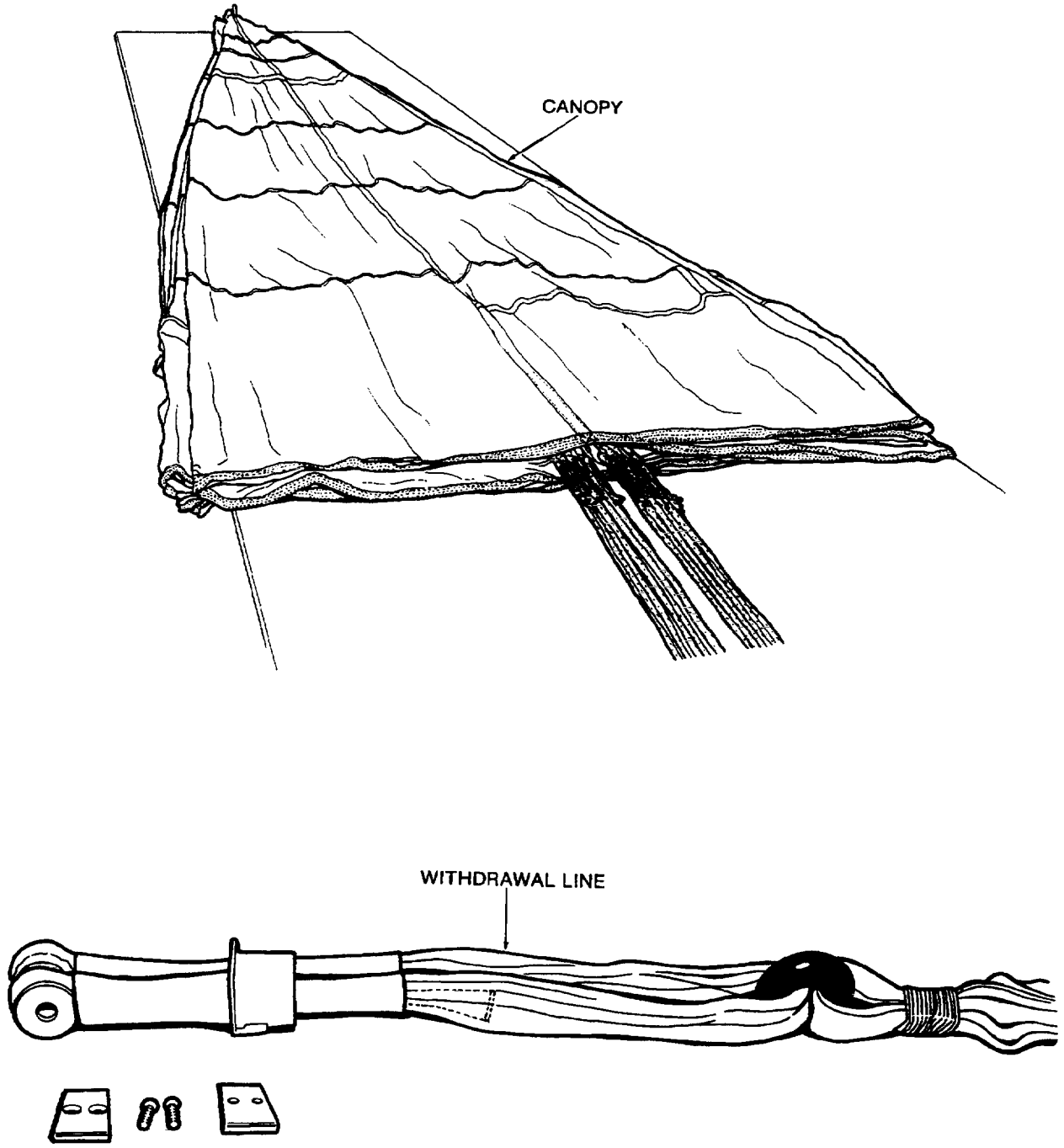

Figure 2. A/P28S-32 Subassemblies (Sheet 1 of 3)

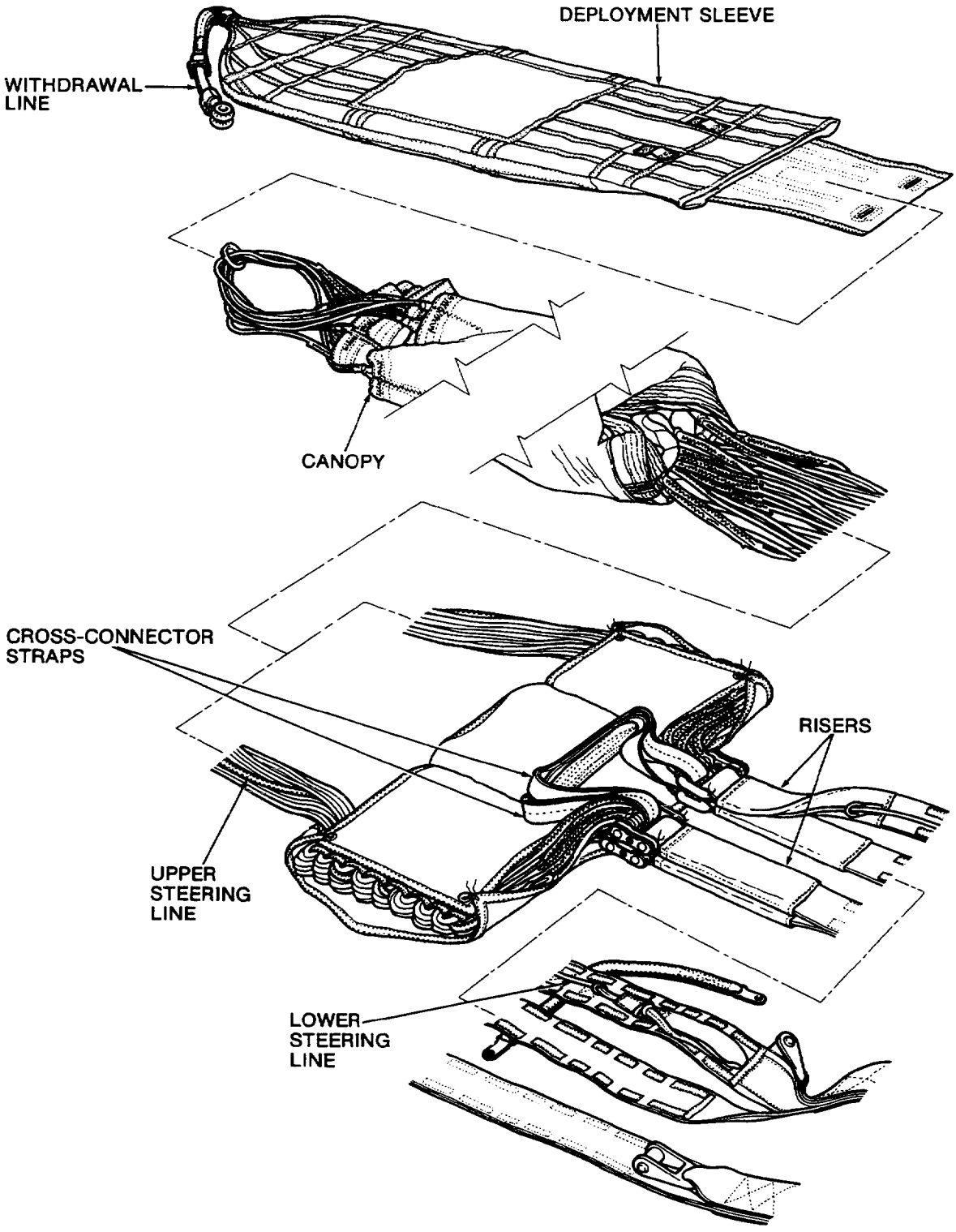

Figure 2. A/P28S-32 Subassemblies (Sheet 2 of 3)

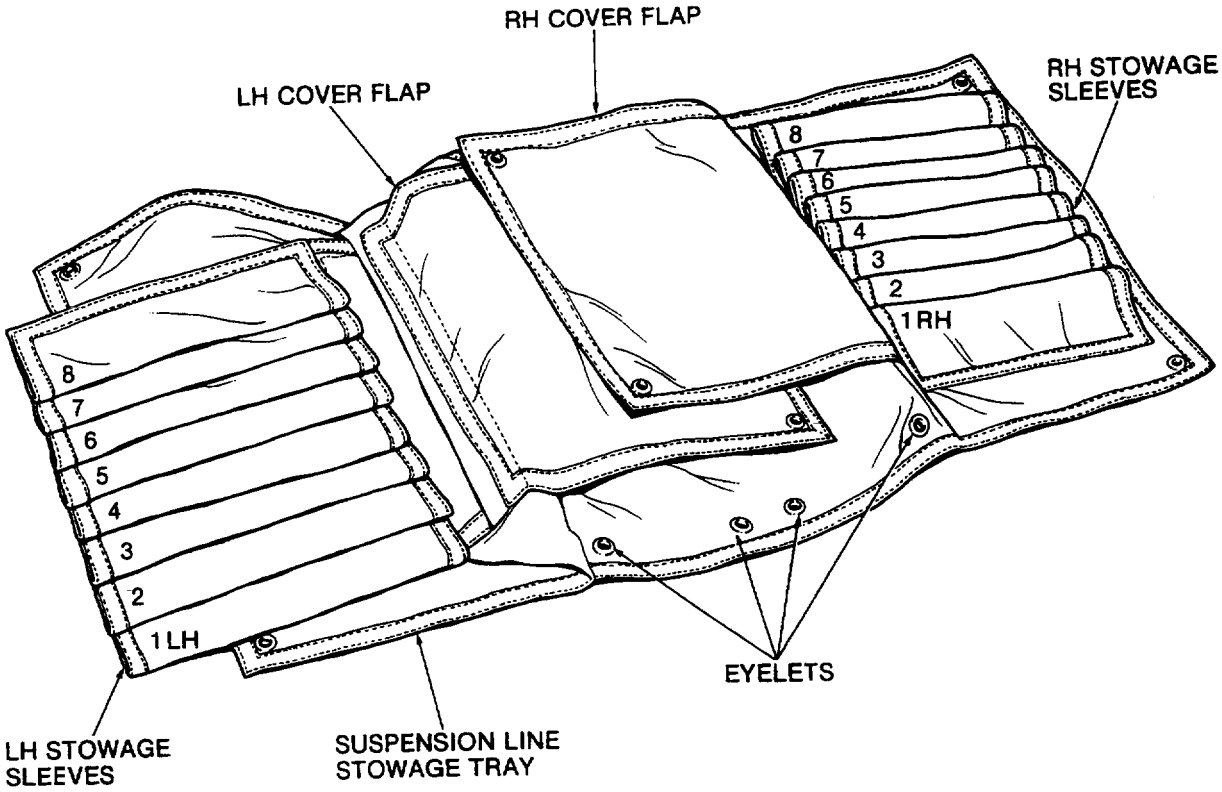

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Figure 2. A/P28S-32 Subassemblies (Sheet 3 of 3)

(1) The drogue deployment catapult fires and the drogue is deployed to extract the bridle, to stabilize and decelerate the seat.

(2) The drogue bridle remains connected to the seat until the seat has descended to 18,000 feet.

(3) The drogue bridle is then released and the parachute deployment rocket motor fires, unlocking the container lid and extending the withdrawal line.

(4) The withdrawal line withdraws the personnel parachute in it's sleeve and pulls the suspension lines and connector links out of the suspension line stowage tray until the load is taken by the risers attached to the PCU-33/P or PCU-56/P parachute restraint harness.

(5) As the load is applied, the sleeve is drawn off the parachute canopy. The parachute canopy begins to inflate, the thread ties securing each pair of suspension line links break, and the canopy deploys fully.

(6) At the same time, the harness release system operates and the aircrew separates from the seat.

9. MANUAL OVERRIDE SYSTEM (MOR).

a. If, after ejection, the automatic system fails, operation of the emergency restraint release MOR handle allows the following functions to take place:

(1) A cartridge situated in the MOR breech fires. MOR breech gas operates the upper and lower harness locks and initiates the parachute deployment unit rocket motor.

(2) The container lid is released by the parachute deployment unit rocket motor and the withdrawal line is extended.

(3) The personnel parachute in its sleeve is withdrawn from the parachute container and the suspension lines and connector links are drawn out of the suspension line stowage tray until the load is taken by the risers attached to the PCU-33/P or PCU-56/P parachute restraint harness.

(4) As the parachute deployment unit rocket motor continues to apply a load, the sleeve is drawn off the parachute canopy and the canopy begins to inflate.

(5) The thread ties, securing each pair of suspension line links, break, and the parachute deploys fully.

10. DELETED.

ORGANIZATIONAL MAINTENANCE

REPAIR PROCEDURES

A/P28S-32 PERSONNEL PARACHUTE ASSEMBLY

PART NUMBERS MBEU147710, MBEU147710-1, MBEU147711, MBEU147712, MBEU147713, and MBEU148030

List of Effective Work Package Pages

Page No.	Chg. No.	Page No.	Chg. No.	Page No.	Chg. No.	Page No.	Chg. No.
1 thru 7	9						

Reference Material

Alphabetical Index

Record of Applicable Technical Directives

Type/No.	Date	Title and ECP No.	Date Inc.	Rescission Date
ACC 629	11 Sept 97	SJU-17(V)1-A Canopy Breaker	1 Jun 98	31 Dec 2002

1. INTRODUCTION.

a. This work package (WP) contains instructions for organizational level repair to ensure that the parachute assembly remains in ready-for-issue (RFI) status.

b. When performing repairs detailed in this WP, follow these guidelines:

(1) Review all applicable instructions prior to starting repair.

(2) Ensure all necessary support equipment and materials required are available prior to starting repair.

(3) To ensure conformity, all repair work shall be carefully inspected and compared to applicable instructions at completion of work.

(4) A quality assurance (QA) inspector shall examine the finished work.

2. PARACHUTE HARNESS SENSING RELEASE UNIT (PHSRU).

3. PHSRU TORQUE SEAL REPLACEMENT.

Materials Required

Specification or Part Number	Nomenclature
F-900 Torque Seal (Color Optional)	Sealing Compound

a. Torque loose screws to a value of 11 to 13 in-lbs.

b. Apply torque seal to the plug assembly, sensor plug, and electronics package assembly attaching screws (Figure 1).

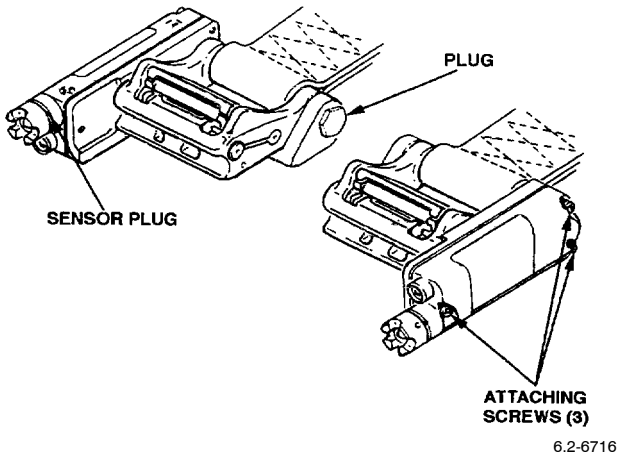

Figure 1. Replacement of Torque Seal on PHSRU

4. PHSRU BATTERY AND SENSOR PLUG REPLACEMENT.

Support Equipment Required

Specification or Part Number	Nomenclature
FLUKE-77	Multimeter
SA852AS112	Torque Driver
SA852AS113	Torque Tool, Sensor Plug
GGG-W-641	Socket Handle, 1/4-in. Drive
3405AS101-2	Socket, Special 7/16 x 1/4-in. Drive

a. Perform PHSRU Organizational Level Maintenance in accordance with WP 024 02 for the following tasks:

(1) Removal of battery.

(2) Installation of battery.

(a) Conduct the following:

1) Battery voltage check.

2) Battery polarity check.

3) Battery installation.

4) Final check.

(3) Removal of sensor plug.

(4) Installation of sensor plug.

(a) Conduct the following:

1) Sensor plug resistance check.

2) Final check.

5. RISER ASSEMBLY.

6. STEERING LINE PULL LOOP TACKINGS REPLACEMENT.

Materials Required

Specification or Part Number	Nomenclature
GGG-N-202	Needle, Sailmakers
V-T-295	Thread, Nylon, Size A, Type I or II, Class A

NOTE

Tie off all tackings with a surgeon's knot topped with a square knot, followed with a binder knot per WP 002 00. Trim off excess leaving 1/2-in.

a. Separate the risers as necessary to expose the steering line, guide ring, and pull loop.

b. Ensure the eye in the steering line is over the loop on the riser (Figure 2).

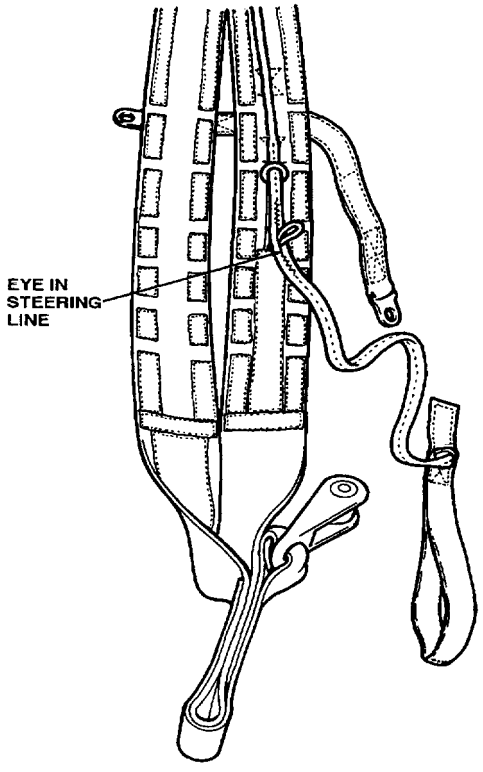

Figure 2. Eye in Steering Line

c. Ensure the steering handle tab is positioned in the loop on the riser (Figure 3), and the hook and pile fastener on the steering handle and riser are mated.

d. Form the excess steering line from the handle into a loop and lay the loop alongside the red handle (Figure 3).

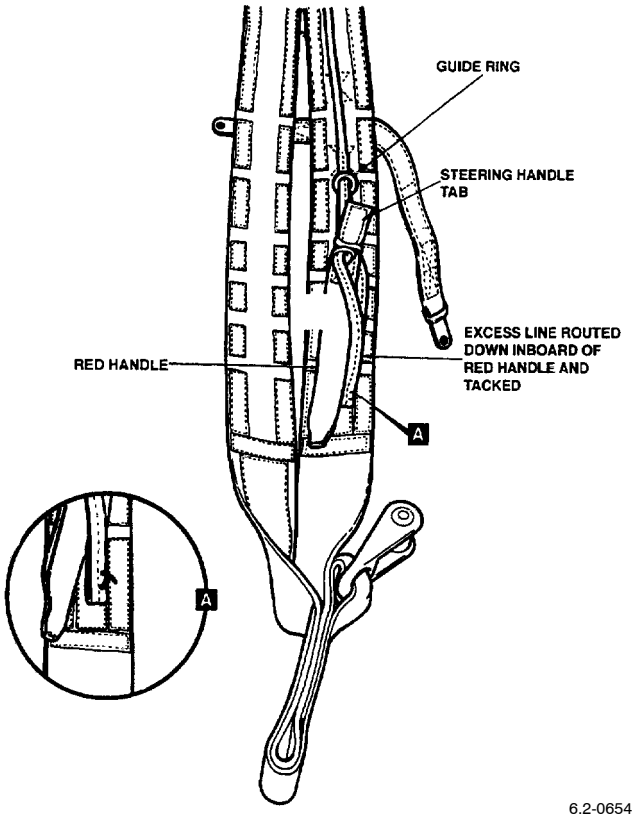

Figure 3. Replacement of Steering Line Pull Loop Tackings

e. Using a needle and a single length of thread, pass the needle down thru the loop in the steering line and the riser about 1/4-in. from the end of the loop, insure tacking does not pass thru red handle, then back up thru the riser, making sure that the needle reappears to one side of the steering line loop and not thru it; tie off (Figure 3).

f. Ensure the steering line is routed centrally between the risers, mate the risers using the hook and pile fastener and reposition the riser on the headpad using the hook and pile fastener.

7. INSTALLATION OF UPPER RISER COVER.

NOTE

Riser cover will be changed every 728 day inspection or removed anytime for cause.

a. Remove old or worn riser cover.

b. Tuck riser cover as far as possible under the container lid lip (Figure 4).

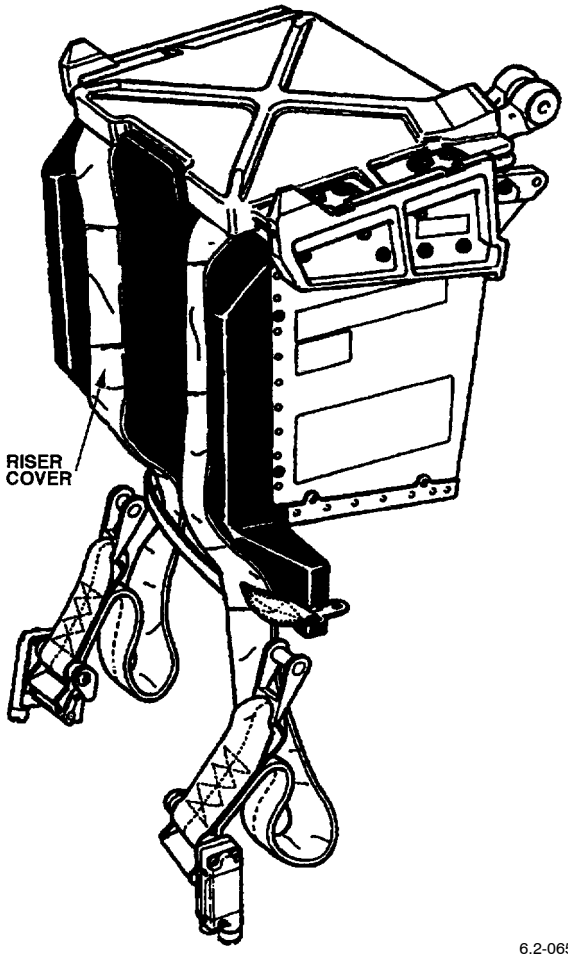

Figure 4. Installation of Riser Cover

c. Install the riser cover on the riser by folding it over the top webbing layer of the riser. Secure the hook fastener to the pile tape.

d. Secure front and rear risers together by securing riser pile fastener tape to riser hook fastener tape. (QA)

e. Repeat step c for the other riser.

8. RISER COVER MODIFICATION.

Materials Required

Specification or Part Number	Nomenclature
PIA-W-4088	Webbing, Nylon OD, Type IX, 3-in., Class 1, 1A, or 2
V-T-295	Thread, Nylon, Size E, Type I or II, Class A

a. Remove new riser covers from package.

b. Cut 3-inch length of 3-in. webbing. Sear cut ends.

c. On connector link cover end, mark 1 1/2-in. from end.

d. On riser cover, fastener pile side, lay 3-in. length of webbing on seared end at mark on riser cover, with excess length toward connector link.

e. Sew a 1/2-in. box-X, 1/8-in. from webbing edge, using size E thread, backstitch 1/2-in.

f. Repeat steps b thru e for opposite cover.

g. During installation of riser covers on risers, remove headpad and route 3-in. wide webbing under cover lid lip.

h. Install headpad.

9. FABRICATION AND INSTALLATION OF LOWER RISER COVER.

Support Equipment Required

Part Number	Nomenclature
—	Hot Knife
—	Shears
—	Square

Materials Required

Specification or Part Number	Nomenclature
MIL-C-7219	Cloth, Nylon Type III, Class 1 Sage Green
MIL-F-21840	Fastener Tape, Hook, 5/8-in. Wide, Type II, Class 1, Sage Green
MIL-F-21840	Fastener Tape, Pile 5/8-in. Wide, Type II, Class 1, Sage Green
V-T-295	Thread, Nylon, Size E, Type I or II, Class A, Sage Green

NOTE

If several riser covers are to manufactured, it is recommended that a flat pattern (Template) be fabricated to ensure consistent repeatability.

a. Lay out a 15 1/4 x 5-in. rectangle (Figure 5).

b. On the bottom left side measure and mark in 4 3/8-in. Repeat procedure on the top line.

c. Using square and starting on the bottom line, at the 4 3/8-in. mark, measure up 3/8-in.

d. Using square, on the top line, at the 4 3/8-in. mark, measure down 3/8-in.

e. On the far right side, measure and mark 3/8-in. from top and 3/8-in. from the bottom.

f. Using straight edge, connect the top 3/8-in. marks.

g. Using straight edge, connect the bottom 3/8-in. marks.

h. Using hot knife and straight edge sear cut on lines measured and drawn in the above steps.

i. At the 4 3/8-in. mark, sear cut a slit an additional 3/8-in. down from top and up from bottom. This is to allow the outside edges to be folded.

j. Fold edges over 3/8-in. and sew 1/16-in. from seared edge.

k. Cut two pieces of 5/8-in. hook fastener tape 10-in. long. With folded side up, starting at the 3/8-in. slit, place fastener tape 1/16-in. from top edge and sew in place with a box stitch. Box stitch should be 1/16-in. inboard of fastener tape.

l. Repeat step k for bottom edge.

m. Cut two pieces of 5/8-in. pile fastener tape 10-in. long. With folded side down, starting at the 3/8-in. slit, place fastener tape 1/16-in. from top edge and sew in place with a box stitch. Box stitch should be 1/16-in. inboard of fastener tape.

n. Repeat step m for bottom edge.

o. Cut a 4-in. piece of pile fastener tape. Place fastener tape 1/16-in. from top left edge and sew down with ”E” thread. Box stitch should be 1/16-in. inboard of fastener tape.

p. Cut a 4-in. piece of hook fastener tape. Place the top edge of fastener tape, hook side facing fold, 1/8-in. from bottom left edge. Sew in place with single stitch, backstitch 1/2-in. each end.

q. Installation:

(1) At Parachute Harness Sensing Release Unit (PHSRU) end of riser, separate front and rear riser.

(2) Starting with larger riser end, install lower riser cover on each rear riser by mating pile fastener on cover to hook fastener on riser webbing.

(3) Ensure the lower riser cover is installed as close as possible to the riser stitching that secures the chaff webbing to the riser loop end.

(4) Ensure the hook and pile fasteners on lower riser cover and rear risers are mated.

(5) Join front and rear riser webbing together.

10. INSTALLATION OF LOWER RISER COVER.

Materials Required

Specification or Part Number	Nomenclature
1979AS500-100	Riser Cover Assembly

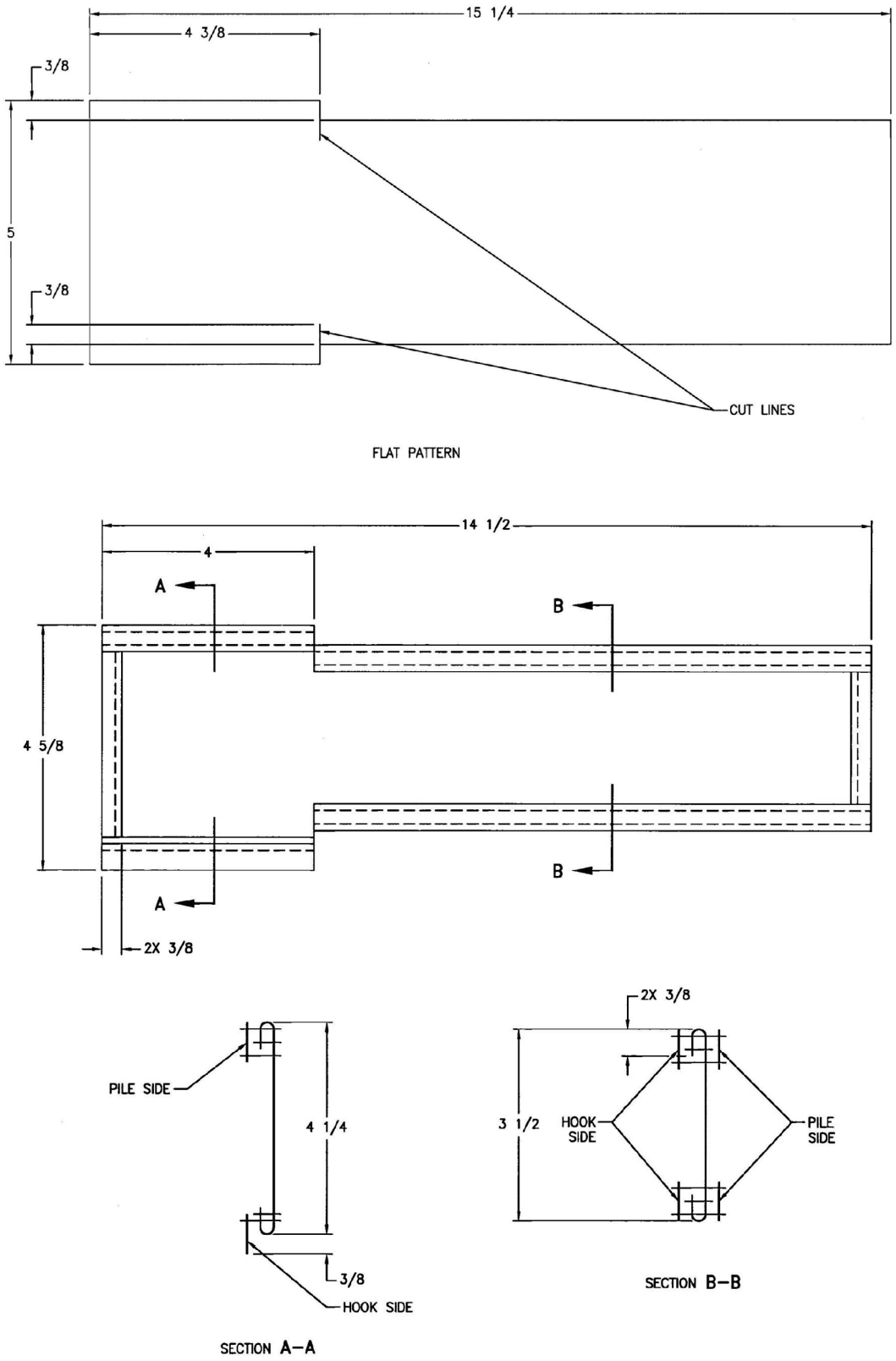

Figure 5. Lower Riser Cover Fabrication

NOTE

One parachute riser cover, P/N 1979AS500-100, consisting of one left and one right riser cover will be sufficient to retrofit the left and right risers of two A/P28S-32(V) parachute assemblies.

a. Remove one new riser cover, P/N 1979AS500-100, from supply package.

b. From top edge of cover with short (4-inch) extension, measure down 14 1/2-in., mark, and sear cut.

c. Using the cut riser cover as a template, lay it over the remaining portion of the cover, mark and sear cut an exact duplicate of the first cover. (There will be excess riser cover remaining that will be disposed of.)

d. At parachute harness sensing release unit riser end, separate front and rear riser. Starting with riser cover end opposite sear cut end, install modified riser cover on each rear riser by mating pile fastener on cover to hook fastener on riser webbing. Ensure modified riser cover is installed as close as possible to the riser stitching that secures the chaff webbing to the riser loop end. Ensure hook and pile fasteners on modified riser covers and rear risers are mated. Join front and rear riser webbing together.

e. Inspect riser and riser covers to ensure that modified riser covers are mated to the rear risers and the front and rear risers are mated together.

f. Repeat steps a thru e for opposite side riser.

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INTERMEDIATE MAINTENANCE

PACKING PROCEDURES

A/P28S-32 PERSONNEL PARACHUTE ASSEMBLY

PART NUMBERS MBEU147710, MBEU147710-1, MBEU147711, MBEU147712, MBEU147713, and MBEU148030

List of Effective Work Package Pages

Reference Material

Alphabetical Index

Alphabetical Index (Cont.)

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Type/No.	Date	Title and ECP No.	Date Inc.	Rescission Date
ACC 629	11 Sept 97	SJU-17(V)1-A Canopy Breaker	1 Jun 98	31 Dec 2002
ACC 672 Amendment 2	30 Jan 03	A/P28S-32(V) 1, 2, 3, 4, 6 Parachute Lower Riser Cover Installation (RAMEC PAX 4613-02-02)	1 Apr 03	30 Jun 2007

1. GENERAL.

a. Packing instructions are provided with the assumption that they will be carried out under ideal conditions in a parachute loft, Work Package (WP) 003 00. When a parachute assembly must be packed under unfavorable conditions, provisions must be made to protect it from possible damage and excessive humidity.

b. In no case shall the packing procedure be interrupted after the operation has started. If the packing operation is interrupted due to unforseen circumstances, the parachute assembly shall be completely repacked as detailed in this WP.

NOTE

Parachute assemblies may be left unattended in the SOAK mode out of normal working hours at the discretion of the users governing authority.

c. Quality Assurance (QA) points have been included in the packing procedures. When a procedural step is followed by "(QA)", there is a quality assurance requirement. Witnessing of QA steps may be delayed by QA if their satisfactory completion is verified in later steps.

d. During the unpacking/packing procedures, packer shall be positioned on left side of packing table, and helper on right side when viewed from riser end of table.

2. PRELIMINARY PROCEDURES.

Support Equipment Required

Part Number	Nomenclature
MBEU143001	Block, Support, RH
MBEU143002	Block, Support, LH
MBEU143003	Block, Support, Front
MBEU143004	Block, Support, Rear
MBEU143005	Block, Support, Lower
MBEU143000	Box Assembly, Packing
MBEU149008	Block, Packing, Short
MBEU149009	Block, Packing, Intermediate
MBEU149010	Block, Packing, Long
MBEU149516	Block, Packing, Loose-Large
MBEU149517	Block, Packing, Loose-Withdrawal Line
MBEU149526	Block, Packing, Loose-Small
PIA-C-5040	Cord, Nylon, Type 1
MBEU149527	Stowage Aid, Deployment Sleeve
GGG-G-17C	Gauge, Feeler, 0.002-in.
TMA2	Hex Head Driver 1/16 in. Bit
Refer to WP 005 00	Hook, Packing (2)
11-1-3512	Line Separator, Small
MBEU149533	Block, Packing, Support, LH
MBEU149535	Block, Packing, Support, Front
MBEU149524	Pin, Removal Tool
MBEU143026	Press, Parachute Packing GSU-342/E
F-900 Torque Seal (Color Optional)	Sealing Compound
LM	Rubber Mat
LM	Padded Block
—	Screwdriver, Torque Tip, Size 8
MBEU149518	Spacer, RH
—	Long Bar
MIL-T-50036A	Talc, Technical (Dusting Powder)
TSQ6	Torque Meter
Refer to WP 005 00	Shot Bag (4)
—	Wrench, Socket, 3/8-in.

Part Number	Nomenclature
Refer to WP 005 00	Tool, Securing, Mouthlocks (4)
MBEU149534	Wedge, Lid, Fitting
—	Wrench, Torque, 0-25 in-lbs.

Materials Required

Specification or Part Number	Nomenclature
V-T-295	Thread, Nylon, Size A, Type I or II, Class A
V-T-295	Thread, Nylon, Size FF, Type I or II, Class A

a. Ensure that all support equipment and materials required are available prior to starting.

b. Inspect packing tools for nicks, burrs, or sharp edges that may cause damage to the parachute assembly.

c. Count and record number of packing tools.

d. Clean packing table.

3. PREPARING THE PARACHUTE PACKING PRESS.

a. Prepare the parachute packing press and locate the packing box assembly as follows (Figures 1 and 2):

(1) Perform preoperational test of the parachute packing press as detailed in NAVAIR 16-30-710.

(2) Make sure:

(a) Personnel in adjacent work area are aware that press is to start operation.

(b) Soak switch to SOAK OFF.

(c) Electrical power supply connected.

(d) Press table is at lower limit (alarm canceled) as detailed in preoperational test.

(e) Both displays show 0.0T's.

4. UNPACKING THE PARACHUTE ASSEMBLY.

a. Place assembly on rubber mat on packing table, headpad uppermost.

b. Remove the four pan head bolts securing the headpad and remove the headpad.

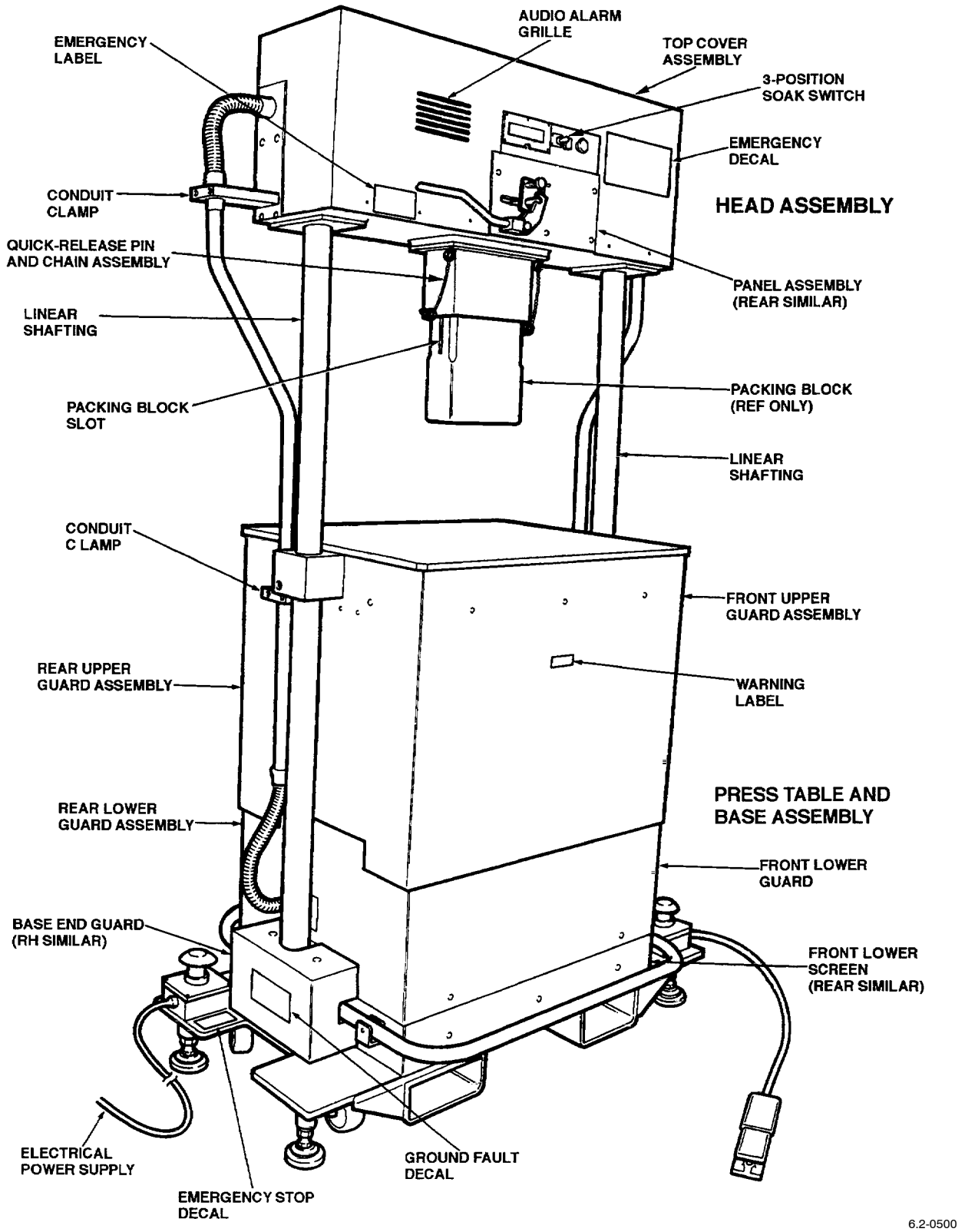

Figure 1. The Parachute Packing Press GSU-342/E

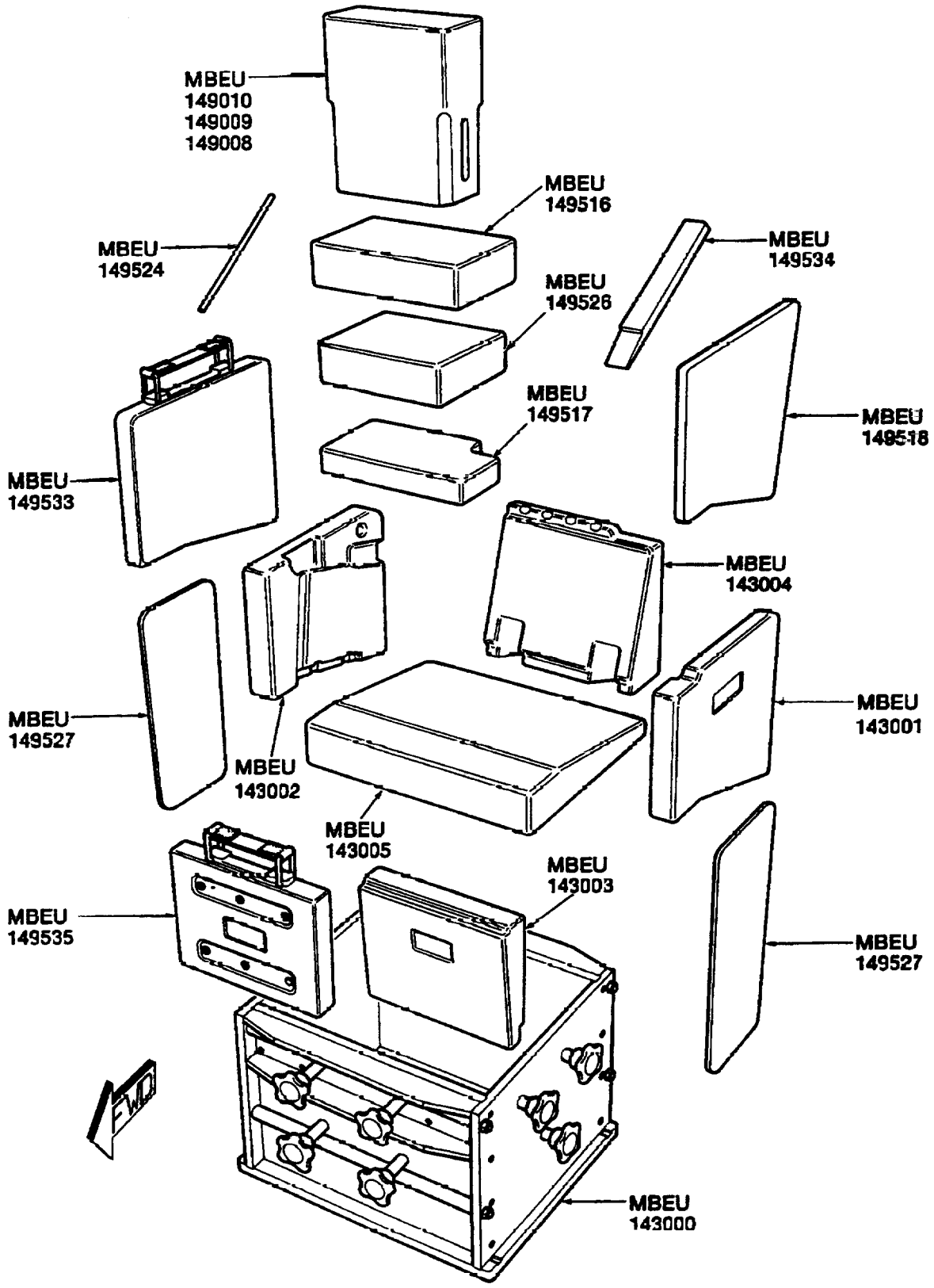

Figure 2. Parachute Packing Accessory Set MBEU149530

c. Remove the lid locking pin securing bolt at the rear LH side of the container, save for reuse (Figure 3). (QA)

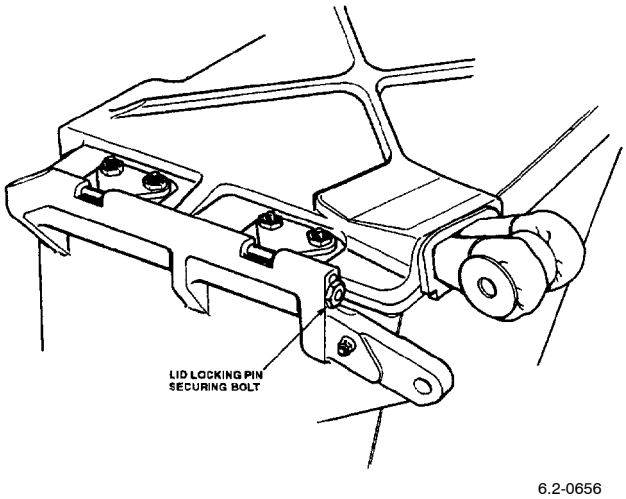

Figure 3. Removing the Lid Locking Pin Securing Bolt

d. Place the packing box on the press table with the four clamp handwheels towards the front (SOAK switch side) of the press.

NOTE

References to RH/LH are as viewed from the front of the press (SOAK switch side) or front of packing box (four handwheels).

e. Unscrew the front and RH packing box handwheels until they are flush on the inside of the packing box.

NOTE

To ensure correct installation, shallow end of lower support block (MBEU143005) must be inserted into packing box first.

CAUTION

Extreme care must be used when handling all support blocks. To prevent damage to blocks.

f. Install the lower support block (MBEU143005) in the support box, shallow end first and facing aft.

g. Install the LH support block (MBEU143002) nameplate aft, shallow end upward, and rear support blocks (MBEU143004).

h. Position the parachute assembly in the packing box, risers forward and routed down the front of the packing box and located against rear block.

i. Install the RH support block (MBEU143001).

j. Install the LH support packing block (MBEU149533) and the RH spacer (MBEU149518).

k. Install the front support block (MBEU143003) with lower cutaway towards parachute container and then install front support packing block (MBEU149535).

l. Tighten the RH handwheels and the front handwheels evenly until the pack is firmly supported.

m. Install the long packing block (MBEU149010) into the packing press and secure with the quick-release pins.

CAUTION

Use padded block to protect container.

n. Place padded block on parachute pack lid. Position the loose-small packing block (MBEU149526) placed slightly to right, flat on the parachute pack lid, using the foot pedal, raise the press table to bring the loose-small packing block up to, and just in contact with, the long packing block (MBEU149010). Align packing box slightly left to centralize long packing block (MBEU-149010) on loose-small packing block (MBEU149526).

o. Make sure both displays show LOAD 0.0T's and UP DEMAND.

p. Make sure that the packing box and packing blocks are correctly centered and aligned.

CAUTION

To prevent damage to parachute assembly, when performing next step apply only sufficient pressure to achieve removal of lid locking pin.

q. Insert the pin removal tool (MBEU149524) in the foward lid locking pin hole.

r. Using the foot pedal, carefully raise the press table and ensure the following:

(1) Packing box is positioned correctly.

(2) Packing blocks are positioned correctly.

(3) Both displays show the load indicated in T's.

s. Carefully apply gentle pressure by raising the press table until a slight gap exists between the upper surface of the lid securing lugs and the underside of the lid securing pin.

t. Remove the lid locking pin by continually tapping the pin removal tool (MBEU149524) driving out forward to aft. Inspect the lid locking pin for damage, and retain for reinstallation. (QA)

u. Remove the pin removal tool.

v. Fully lower the press table using the footbar, and ensure the following:

(1) Long packing block (MBEU149010) is restrained as table lowers and lid rises.

(2) Load displays indicate 0.0T's as load is released.

(3) Press table is fully lowered.

w. Remove the loose-small packing block (MBEU149526) from the lid, and remove the lid from the parachute assembly. Remove the long packing block (MBEU149010).

x. Fully release the front and RH handwheels on the packing box.

y. Remove the front support packing block (MBEU149535), front support block (MBEU143003), and LH support packing block (MBEU149533).

z. Remove the parachute assembly from the packing box and place on a rubber mat at the foot end of the packing table, aft face down, open end towards the head of the table.

5. REMOVING THE PARACHUTE FROM THE CONTAINER.

a. Restrain the container at the foot of the table.

b. Grasp the withdrawal line and pull the deployment sleeve from the container.

c. Continue pulling until all the suspension lines are extracted from the stowage tray in the container.

d. Continue to pull until all suspension lines are pulled from the deployment sleeve, and the deployment sleeve is pulled off the canopy.

e. Attach tension strap hook to canopy vent lines, insert tension hooks into connector links and insert hooks into packing table, and apply tension.

f. Remove the four nuts and sealing washers from the studs in the lower sides of the container and retain for reuse. Remove the stowage tray. (QA)

g. Pull on the suspension lines adjacent to the container to break the thread securing ties, extract the connector links from the stowage tray and lay the risers on the packing table either side of the container.

h. Remove the parachute container, lid, stowage tray, and deployment sleeve from the packing table. Retain the lid locking pin securing bolt with the container, but do not reinstall bolt.

i. Remove any loose equipment/debris (broken thread ties) from the packing table.

j. Remove and scrap used riser covers.

6. INSPECTION (SPECIAL).

a. Maximum scheduled repack cycle is 2190 days.

7. SERVICE LIFE CHECK AND CONFIGURATION UPDATING.

NOTE

Unless otherwise noted, parachute component life shall start on the month of the date of manufacture and expire on the last day of that month.

a. All internal service life components, including cartridges, shall be replaced if service life expires prior to the next repack cycle. Repack cycles may be shortened to correspond to the first component that is expiring prior to the next inspection cycle. An external overage component (i.e. Parachute Harness Sensing Release Unit Cartridge) can be replaced without a parachute repack.

NOTE

Upon initiation of any Quality Deficiency Report (QDR), contact the In-Service Support Team at NAWCWD, China Lake, CA.

b. When replacing an external overage component without a parachute repack, draw a single red line through any information pertaining to that component on the Parachute Record (OPNAV 4790/101). The replacement component will be annotated on the next available line. The QA who witnessed the task shall apply the QA stamp to the right of the entry and complete the VIDS/MAF (OPNAV 4790/60).

c. A parachute assembly may be opened to permit compliance with a Technical Directive. After completion of directive, the parachute assembly repack cycle may be rebased if all parachute components have the necessary life available or may be returned with the original repack date in order to keep it aligned with the actual aircraft inspection cycle.

d. When a component reaches the service/total life limit, it shall be returned to supply for disposition.

e. If parts received from supply are lacking a date of manufacture and are new in manufacturer's packaging, they may be used for one complete repack cycle, then removed. Place "No Date of Manufacture" in the Date of Manufacture's block on the Parachute Record (OPNAV 4790/101). Submission of a Quality Deficiency Report (QDR) shall follow each occurrence.

f. Components without a service/total life shall be removed from service if the components do not pass inspection, as determined by Quality Assurance Representative (QAR) or Collateral Duty Inspector (CDI).

g. Change lower steering lines when canopy is replaced.

h. Check date placed in-service and date of manufacture on each parachute part for service/total life as follows:

Nomenclature	Service Life (Yr)	Total Life (Yr)
Battery	4	4
Canopy Assembly	None	15
Cartridge MW19	Refer to NAVAIR 11-100-1.1	
Cross-Connector Strap	(See Note 1)	(See Note 1)
Deployment Sleeve	None	15
Electronics Package Assembly	None	8
Parachute Withdrawal Line	None	15
Riser Assembly	None	15
Stowage Tray	None	15

NOTE 1: Replace at Riser Assembly replacement.

(1) Check markings for completeness, legibility, and agreement with information on Parachute Record (OPNAV 4790/101), mark if necessary.

(2) Compare configuration of parachute assembly to that shown in WP 026 04 Illustrated Parts Breakdown and Record of Applicable Technical Directives.

8. PARACHUTE WITHDRAWAL LINE.

a. Webbing for contamination, cuts, fraying, deterioration, and loose or broken stitching.

b. Spool for attachment and condition.

c. Clamp for attachment and condition. Verify countersunk half is at bottom. Check location dimension (Figure 4). (QA)

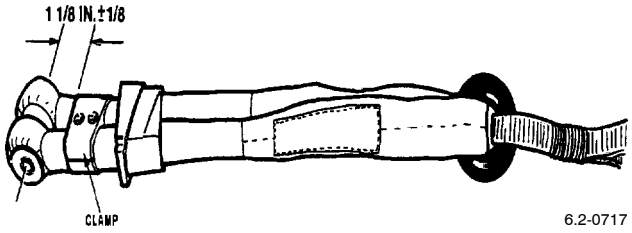

Figure 4. Condition of Withdrawal Line Clamp

d. Seal for condition and location over clamp (Figure 5).

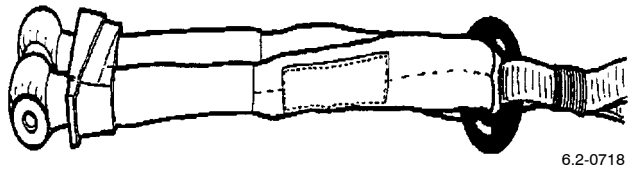

Figure 5. Seal for Location

9. DEPLOYMENT SLEEVE AND STOWAGE TRAY.

a. Withdrawal line attachment to deployment sleeve (Figure 5). (QA)

b. Upper ring on deployment sleeve for nicks, burrs, and corrosion.

c. Deployment sleeve fabric, seams, tapes, elastic for cuts, holes, ruptures, contamination, and elastic failure.

d. Security of suspension line hesitator loops.

10. CANOPY ASSEMBLY.

a. Canopy skirt hem, fabric surface, radial seams, vent hem, cross seams, water deflation pockets, pocket retaining tapes, and netted panels for cuts, hole ruptures, contamination, deterioration, and loose or broken stitching.

b. Le-Moigne slots for condition.

c. Suspension lines for fraying, contamination, burns, presence of twists, snags, and loops.

d. Attachment and condition of steering lines at suspension lines 5 and 16.

e. Steering line rings for attachment and corrosion.

f. Correct steering line installation. (QA)

11. RISER ASSEMBLY.

a. Webbing for contamination, rust at points of contact with metal parts, cuts, twists, fading, wear, fraying, abrasions, loose or broken stitching and broken tackings.

b. Steering line handle for wear, broken stitches, and correct attachment to the lower steering line.

c. Hook and pile tape on left and right riser assemblies for serviceable condition and security of attachment.

d. Steering line riser tackings for security of attachment.

e. Parachute riser retention strap for wear, broken stitches, and correct attachment to left riser.

f. Steering line handle secured to riser by hook and pile fastener tape.

g. Roller fitting assembly for corrosion, damage, and security of attachment.

h. Retention strap lug assembly for corrosion, distortion, sharp edges, and security of attachment.

i. Cross-connector straps for contamination, cuts, fraying, and loose or broken stitching.

j. Proper attachment of cross-connector straps to connector links.

12. SUSPENSION LINE CONTINUITY CHECK.

a. Suspension lines for dips, twists, and proper sequencing (Figure 6). (QA)

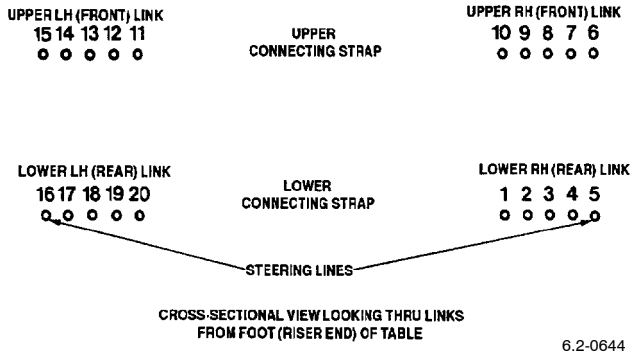

Figure 6. Suspension Line Continuity Check

b. Steering lines are attached to line 5 and 16.

c. Torque seal unbroken with yoke and plate assemblies installed with knurled portion facing up and screwheads facing outboard (Figure 7). (QA)

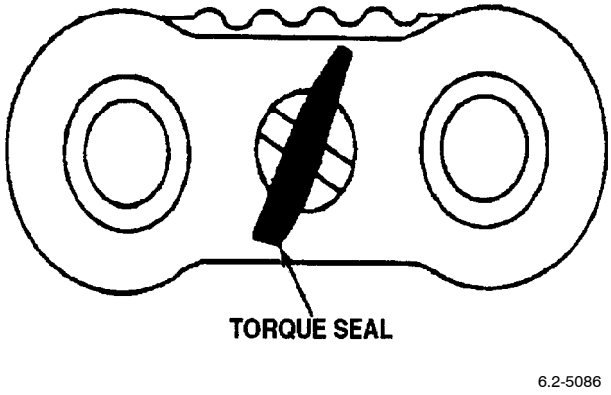

Figure 7. Torque Seal on Connector Link

d. Connector links for corrosion, distortion, bends, dents, nicks, burrs, sharp edges, and cracks.

e. Connector links for defective yoke and plate assemblies. Maximum of 1/32 in. of play allowed in the plate.

f. Connector link tie, installed, and security of attachment.

13. CONTAINER ASSEMBLY.

a. Interior of headbox for foreign objects, corrosion, and structural integrity.

b. Security of bolted on fittings.

c. Container water seal for damage and security of attachment.

d. Container lid for damage, distortion, security of securing lugs, water seal for damage, and security of attachment.

e. Container headpad for cracks, cuts, wear, contamination, hook and pile fastener tape for presence, and security of attachment.

f. Container for cracks, chips, dents, and deterioration.

g. Decals and labels for presence and security of attachment.

14. PREPARATION OF CANOPY.

15. WHIPPING AND FOLDING CANOPY. Whip and fold canopy per (Figure 8).

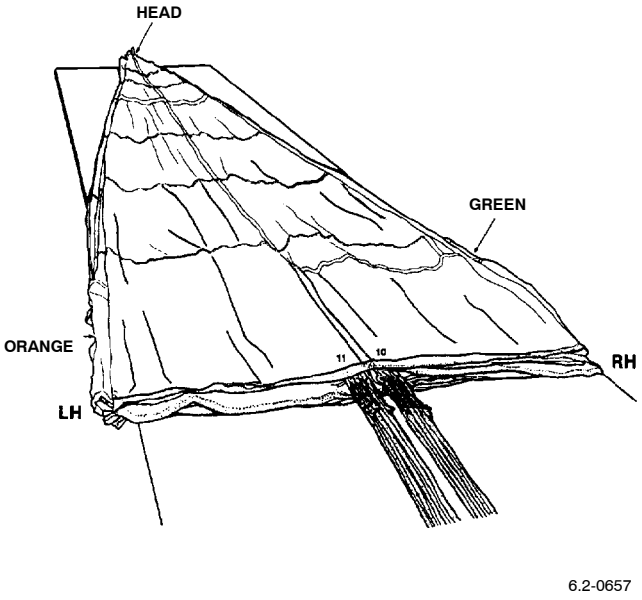

Figure 8. Canopy On Table and Apex Attached To Table Hook

NOTE

Neatness in folding the canopy is important since it will assist stowing into the deployment sleeve which, in turn, contributes towards correct deployment.

a. Packer and helper shall lift suspension lines numbered 11 and 10 up and outward. While holding suspension lines up, packer and helper shall whip gore hanging from line outward.

b. Raise next suspension line upward toward line previously held in hand. Use a rapid circular motion.

c. Continue whipping operation for all gores. Move whipped gores rapidly back and forth across table. Ensure that radial seams are not overlapped by gore material.

d. Stretch the two groups of suspension lines to edges of packing table with gores hanging over sides. Packer and helper, while holding suspension line groups at edges of packing table, shall simultaneously flap hanging gores rapidly up and down, in a whipping motion, to end wrinkles.

e. Packer shall flap top gore up and down at skirt hem center while helper holds bottom gore at skirt hem center.

f. On signal, packer and helper shall pull their respective gores at skirt hem centers toward table edges and at the same time, bring suspension line groups to center of packing table.

g. Packer and helper shall insert suspension line groups into their respective slots in the small line separator. Packer shall place shot bag across suspension lines. Packer shall place another shot bag across skirt hem on packer's side of suspension lines.

h. Helper shall rotate all gores as a group, except bottom gore, from helper's side to packer's side of table.

i. Helper shall straighten and smooth bottom gore on helper's side throughout its length from skirt hem to apex.

j. Packer shall return and smooth folded gores on top of shot bag, one at a time, to helper's side of packing table.

k. Place shot bag across skirt hem on helper's side of packing table.

l. Packer shall rotate all folded gores as a group, except bottom gore, from packer's side to helper's side of packing table.

m. Packer shall straighten and smooth bottom gore on packer's side throughout its length from skirt to apex.

n. Helper shall return and smooth folded gores on top of shot bag, one at a time, to packer's side of packing table (Figure 9).

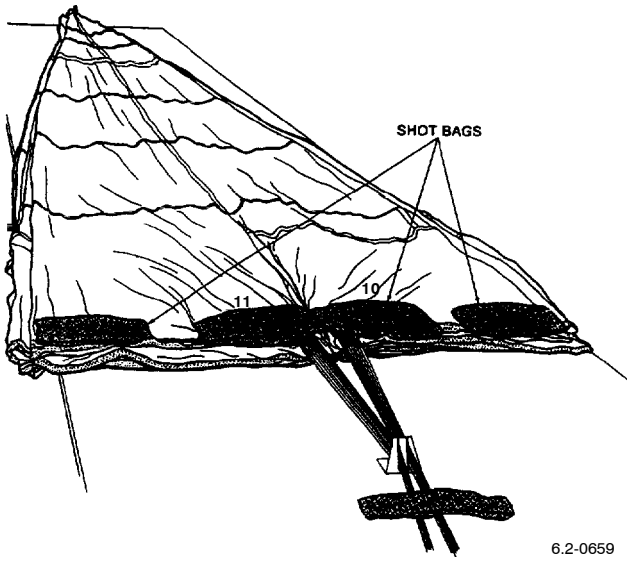

Figure 9. Canopy Folded

o. Remove shot bag from gores. Packer and helper shall grasp skirt hem at gore midsections and rotate toward suspension lines.

p. Packer and helper shall align and count each fold when placing folds back on table. Skirt shall be made neat by having pocket bands aligned in same direction inward on top of each other and gore 11 (orange) is on top (Figure 8).

q. Fold the LH and RH groups of gores at the skirt inboard and upward to the center by grasping the skirt hems at the corners and rotating inboard (Figure 10).

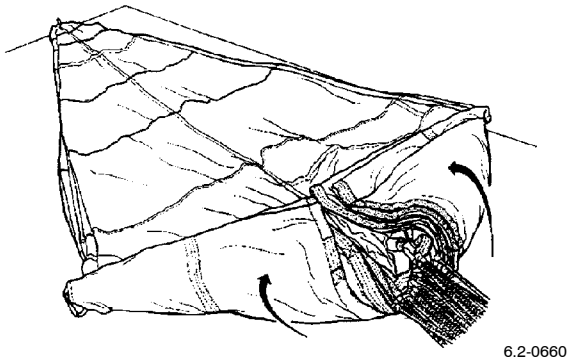

Figure 10. Folding The Canopy Skirt Gores Inboard

r. Fold the RH canopy gores progressively from the skirt to the apex inboard to cover the central seam and then similarly fold the LH group on top of the RH group, aligning the LH gores with the RH outer edge and position shot bags to retain the folds (Figure 11). (QA)

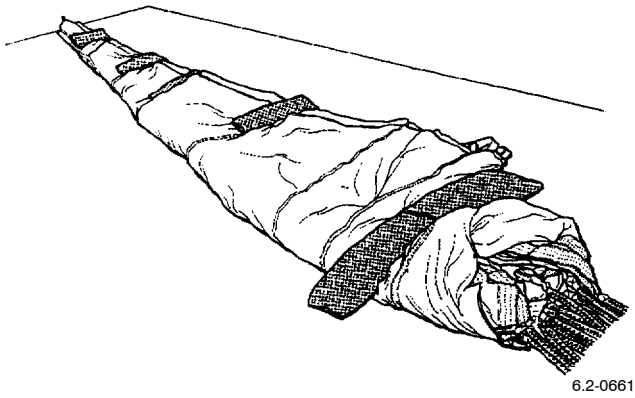

Figure 11. Canopy Folded, Shot Bags Positioned

s. Release the tensioner and connector links, disconnect the apex bridle from the table hook and pull the canopy down the table enough to enable the deployment sleeve to be positioned between the canopy apex and table hook.

16. PREPARATION OF DEPLOYMENT SLEEVE.

a. Position the deployment sleeve at the table head and attach the apex to the table hook, mouthlocks side uppermost (Figure 12).

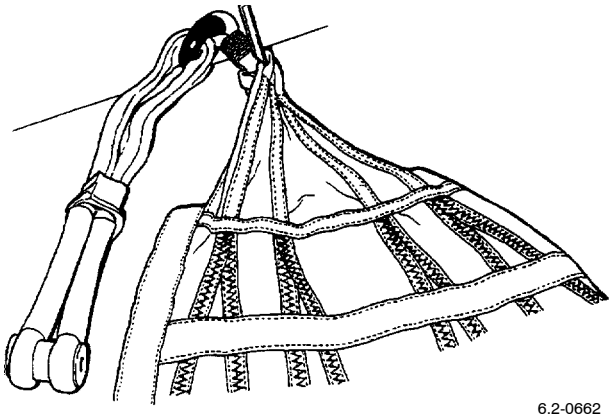

Figure 12. Deployment Sleeve Attached to Table Hook

b. Roll bottom end of deployment sleeve back to first mouthlock loop slots. Further roll the sleeve back over itself to expose the first canopy stowage locking loops (Figure 13).

Figure 13. Deployment Sleeve Folded Back to First Mouthlock Loops

17. STOWING CANOPY IN DEPLOYMENT SLEEVE.

a. Fold the canopy apex bridle down the RH side of the canopy and position the apex in the mouth of the deployment sleeve (Figure 14).

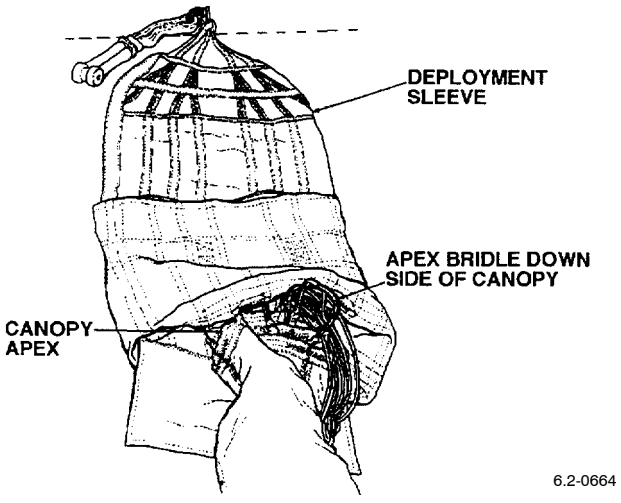

Figure 14. Canopy Apex Located in Mouth of Sleeve

NOTE

Remove shot bags from canopy as canopy is stowed.

b. Locate the canopy apex in the top RH corner of the deployment sleeve with the apex lines routed outboard (Figure 15, Stage 1). (QA)

c. S-fold the canopy into the deployment sleeve RH to LH and LH to RH until the canopy is level with the first mouthlock loops. In stage 2 there should be 6 folds, 80-in. of canopy in the sleeve with the canopy exiting outboard of the RH mouthlock loop (Figure 15, Stage 2). (QA)

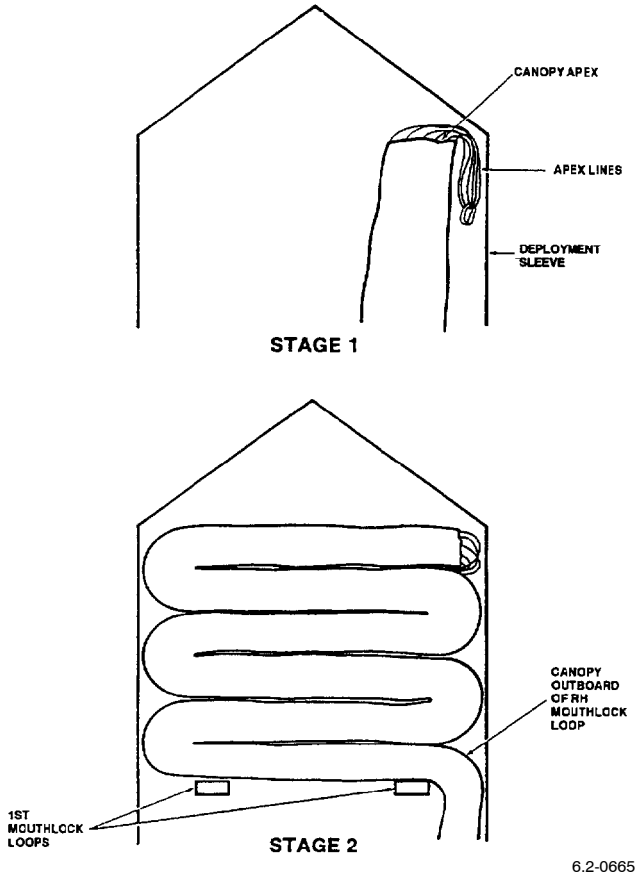

Figure 15. Stowing the Canopy-Stages 1 and 2

d. Pull deployment sleeve down to expose the first mouthlock loops. Pull the first mouthlock loops thru the slots in the deployment sleeve and temporarily secure with the securing tools (Figure 16) ensuring that canopy exits outboard of RH mouthlock loop (Figure 15, Stage 2). Stow bag loop flap toward canopy. (QA)

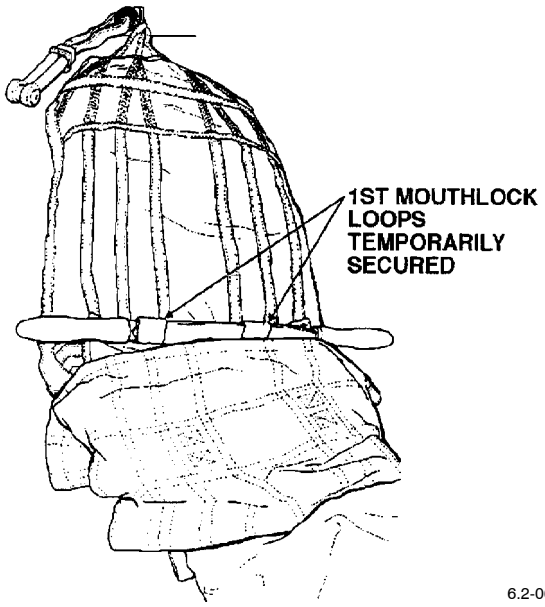

Figure 16. First Mouthlock Loops Secured

e. Continue stowing the canopy in S-fold fashion, RH to LH and LH to RH, into the deployment sleeve until the canopy is level with the second mouthlock loops. In stage 3, there should be 6 folds, 53-in. of canopy in the sleeve with the canopy exiting outboard of the RH mouthlock loop (Figure 17). (QA)

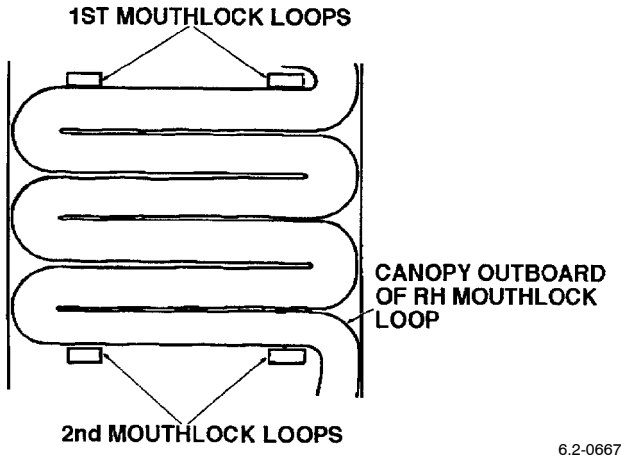

Figure 17. Stowing the Canopy - Stage 3

f. Pull deployment sleeve down. Pull the second mouthlock loops thru the slots in the sleeve and temporarily secure with the securing tools (Figure 18).

g. Remove the shot bags from the periphery of the canopy and pull the deployment sleeve fully down over the canopy (Figure 18). (QA)

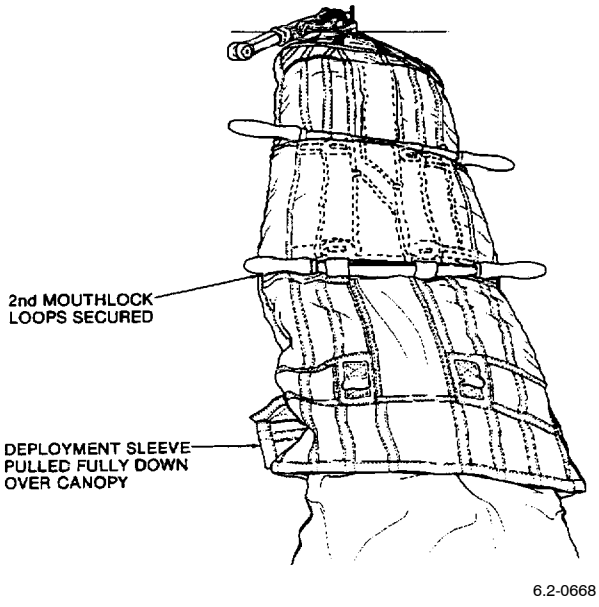

Figure 18. Second Mouthlock Secured, Sleeve Pulled Down Over Canopy

h. Continue to S-fold the canopy into the deployment sleeve, there should be about 40-in. of canopy to be stowed. Stow the canopy skirt fully into the mouth of the sleeve with the suspension lines emerging on the RH and LH sides of the sleeve (Figure 19). Remove small line separator. Make sure that the suspension line double sewn ends are positioned approximately equal on the sleeve (Figure 19). (QA)

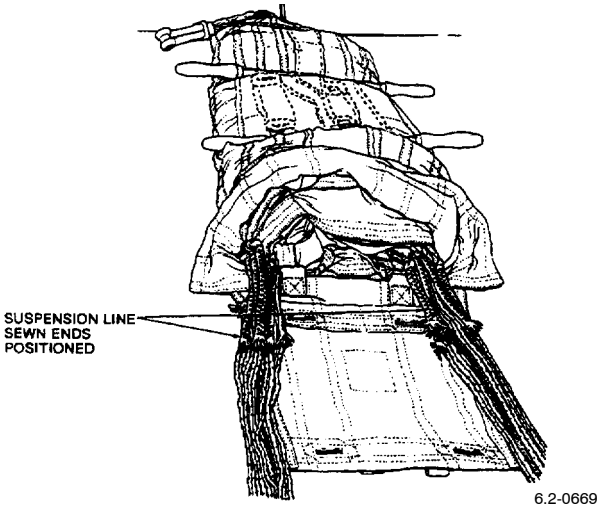

Figure 19. Canopy Skirt Stowed

i. Pass a stowage hook thru the LH elastic loop from outboard to inboard, form a bight in the LH suspension lines and pull the bight thru the elastic loop from inboard to outboard. Make sure that about 2-in. of lines are outboard of the loop and that the double sewn ends are about 1-in. inboard of the loop (Figure 20 and 21).

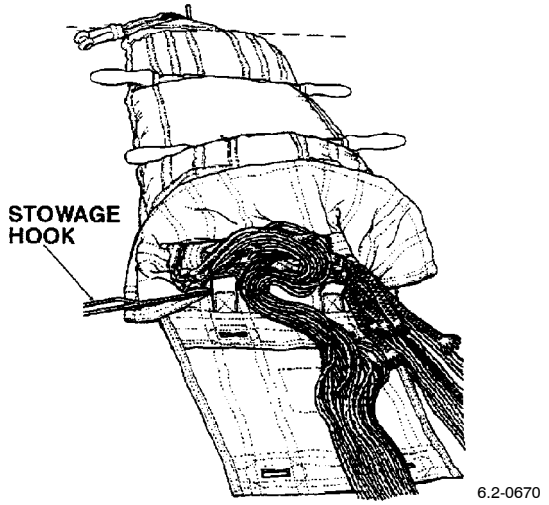

Figure 20. Stowing Suspension Lines in Elastic Loops

j. Pass a stowage hook thru the RH elastic loop from outboard to inboard, form a bight in the RH suspension lines and pull the bight thru the elastic loop from inboard to outboard. Make sure that about 2 in. of lines are outboard of the loop and that the double sewn ends are about 1-in. inboard of the loop (Figure 21). (QA)

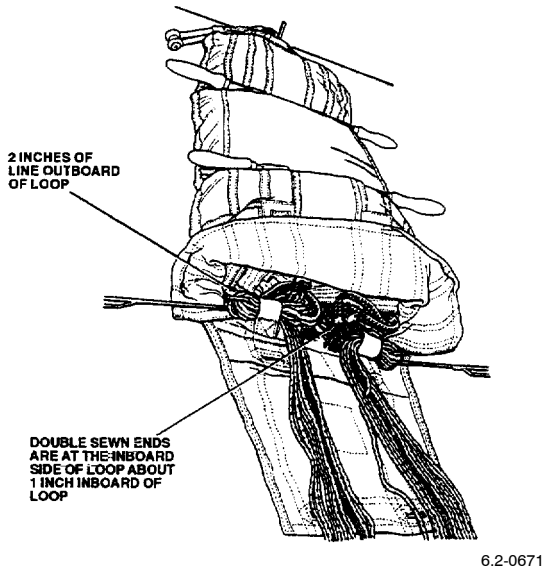

Figure 21. Suspension Lines Stowed in Elastic Loops

k. Remove the stowage hooks. Route the suspension lines centrally on the deployment sleeve bottom flap between the two pairs of slots. (QA)

l. Fold the mouth opening cover outboard edges inboard and the top down to cover the canopy skirt. (QA)

m. Fold the bottom flap up and over the sleeve and pass the two elastic loops on the sleeve upper surface thru the corresponding slots in the flap. Secure the loops with stowage hooks inserted from outboard to inboard (Figure 22). (QA)

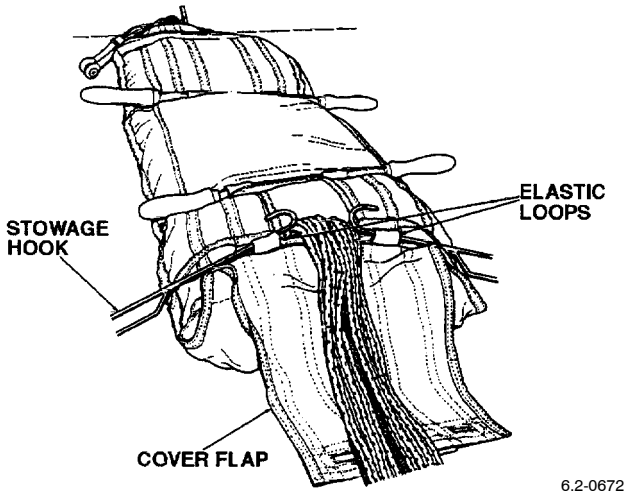

Figure 22. Bottom Flap Lower Elastic Loops Secured

n. Form a bight with all suspension lines and pull thru the LH elastic loop using the stowage hook from inboard to outboard, so that about 2 in. of lines are protruding outboard of the loop (Figure 23). (QA)

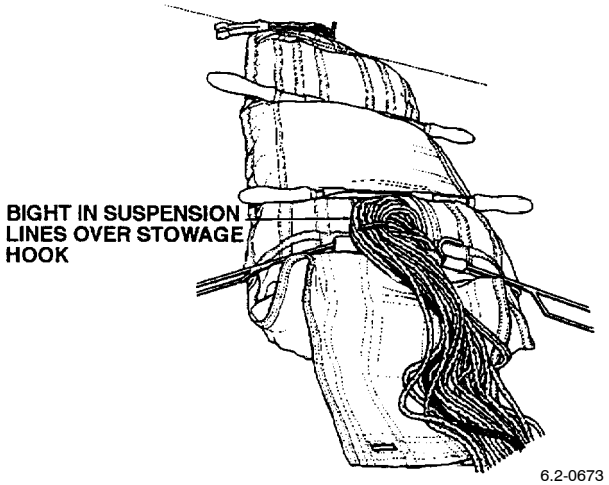

Figure 23. Stowing Suspension Lines in LH Elastic Loop

o. Form a bight with all suspension lines and pull thru the RH elastic loop using the stowage hook from inboard to outboard, so that about 2 in. of lines are protruding outboard of the loop (Figure 24). (QA)

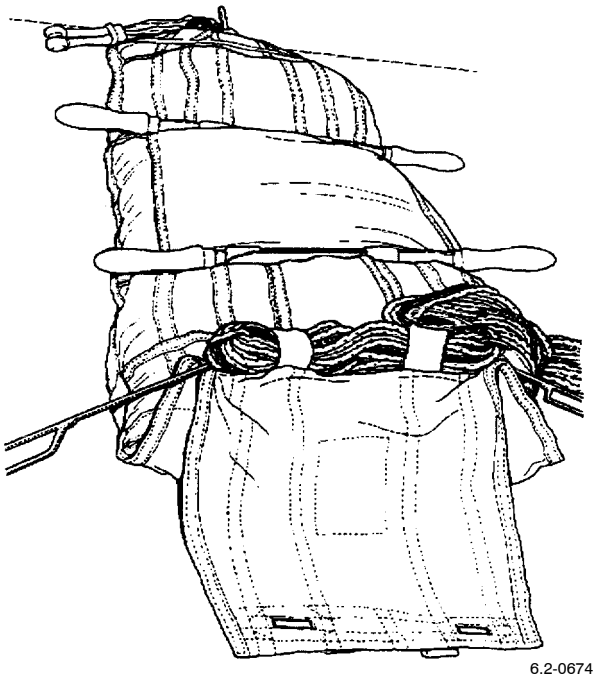

Figure 24. Suspension Lines Stowed in LH/RH Elastic Loops

p. Remove the packer's stowage hooks.

q. Form a large bight in the lines and pass the lines centrally thru the protection tunnel on the deployment sleeve (Figure 25). (QA)

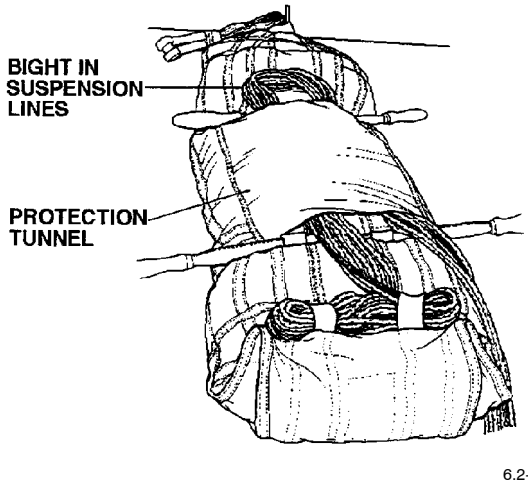

Figure 25. Suspension Lines Passed Thru Protection Tunnel

r. Carefully remove the upper mouthlocks securing tools and insert stowage hooks thru loops from outboard to inboard. (QA)

s. Make a loop in the suspension lines and draw thru the LH loop from inboard to outboard. Cover the LH group of lines in the tunnel with the flap. Make a loop in the suspension lines and draw thru the RH loop from inboard to outboard (Figure 26). (QA)

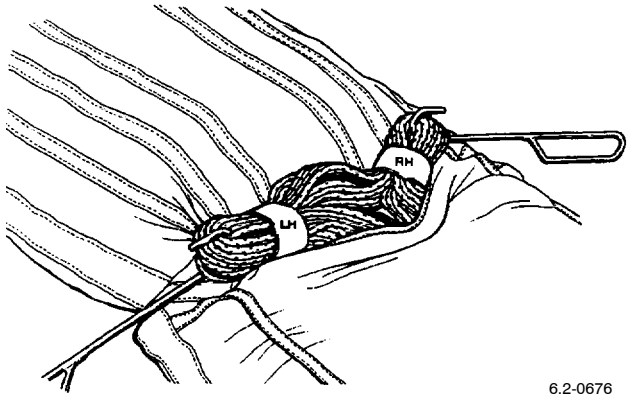

Figure 26. Suspension Lines Stowed in 1st Mouthlock Loops

t. Adjust the loops so that about 1 1/2-in. of lines protrude outboard of the LH and RH loops (Figure 26). (QA)

u. Remove the packer's stowage hooks.

v. Pull up the top end of the protection tunnel to cover the lines stowed in the elastic loops. Arrange the unstowed suspension lines to emerge centrally from the protection tunnel and lay centrally on top of the tunnel leading away to the right. Cover the LH group of lines in the tunnel with the flap (Figure 27).

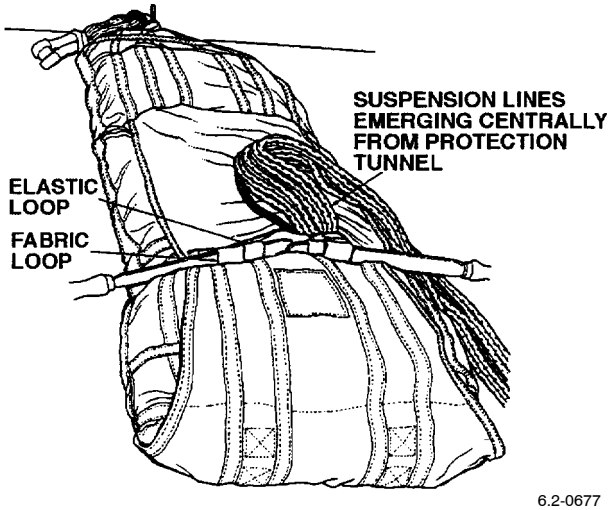

Figure 27. Bottom Cover Flap Temporarily Closed and Secured

w. Fold the bottom cover flap over the lower end of the deployment sleeve so that the two slots in the flap are aligned with the two fabric locking loops adjacent to the end of the protection tunnel (Figure 27).

x. Remove the locking tool from the LH fabric loop, pass the loop thru the matching flap slot and secure the fabric loop and the LH elastic loop on the flap with the locking tool. (QA)

y. Remove the locking tool from the RH fabric loop, pass the loop thru the matching flap slot and secure the fabric loop and the RH elastic loop on the flap with the locking tool. (QA)

z. Carefully remove the locking tools from each pair of loops and insert suspension line stowage hooks, outboard to inboard (Figure 28).

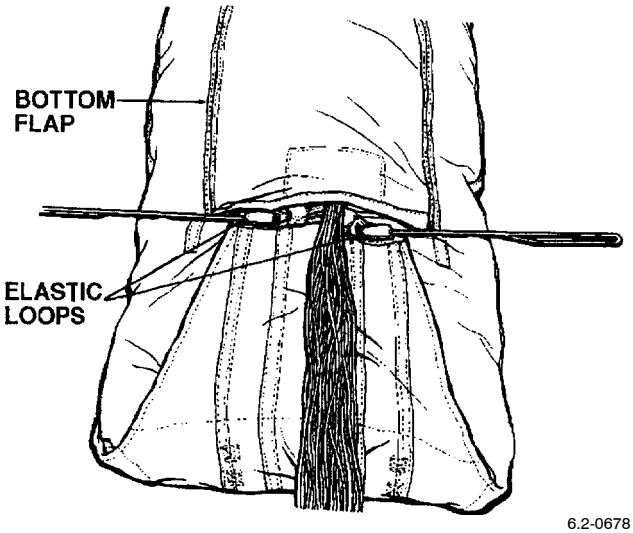

Figure 28. Bottom Cover Flap Temporarily Secured, Suspension Lines Positioned

aa. Route the suspension lines centrally on the bottom flap and between the stowage loops (Figure 28).

ab. Form a 3 in. bight in the suspension lines, and using the stowage tool, draw the loop thru the LH elastic and fabric loops so that about 1 1/2-in. of lines protrude beyond the outboard loop (Figure 29). Ensure that there is enough slack in the lines under the protective tunnel between this stowage and the previous stowage. This will prevent withdrawal of the lines from either stowage due to flexing of the sleeve during installation into the parachute container. (QA)

ac. Form a 3-in. bight in the suspension lines and draw the bight thru both the RH elastic and fabric loops. Make sure that about 1 1/2-in. of lines protrude beyond the outboard loop (Figure 29) and that the portion of lines between the stowages is taut. (QA)

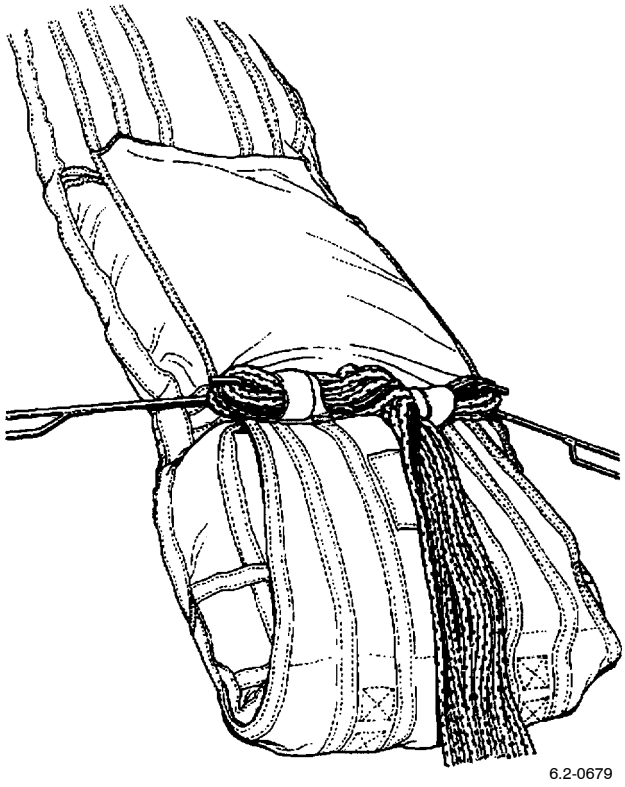

Figure 29. Suspension Lines Stowed in Bottom Flap Locking Loops

ad. Arrange the unstowed portion of suspension lines to lead away centrally from between the two pairs of bottom flap locking loops. Lay the lines centrally on the bottom flap (Figure 30). (QA)

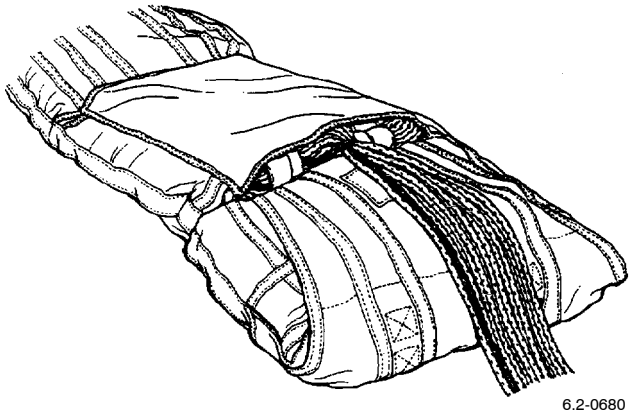

Figure 30. Canopy Stowage Completed

ae. Pull down the protection tunnel to cover the suspension lines stowed in the bottom flap locking loops. (QA)

af. Gently pummel the deployment sleeve to spread the bulk and attain a neat, even shape.

18. STOWING SUSPENSION LINES.

NOTE

Tie off all tackings with a surgeon's knot topped with a square knot, followed with a binder knot per WP 002 00. Trim off excess leaving 1/2-in.

a. Remove tension hooks, and tie connector link ties with one turn of size FF thread, single and waxed; tie off (Figure 31).

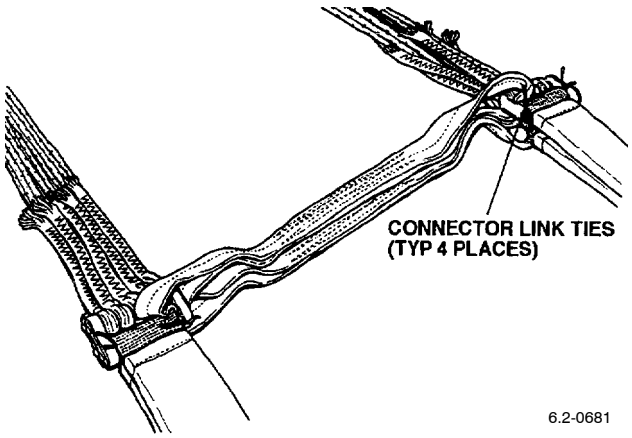

Figure 31. Suspension Line Link Tackings

b. Position the suspension line stowage tray under the suspension lines (Figure 32).

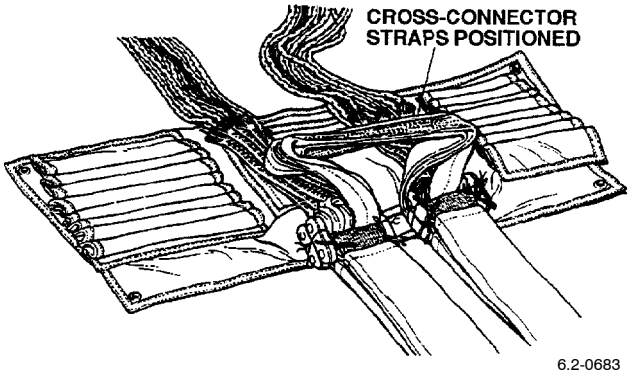

Figure 32. Connector Links Secured, Cross-Connector Straps Positioned

c. Fold the LH/RH cover flaps inboard to lay flat in the center of the stowage tray, straighten the suspension lines and position the cross-connector straps centrally on top of the suspension lines (Figure 32).

d. Tie off the suspension line connector links to the stowage tray using a single turn of waxed size FF thread thru each stowage tray eyelet and around the lower section of each pair of connector links; tie off (Figure 33). (QA)

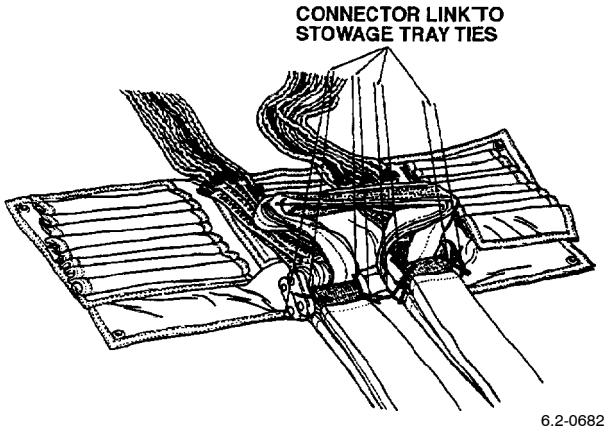

Figure 33. Stowage Tray Positioned, Securing Stowage Tray Ties

e. Route the LH and RH groups of suspension lines outboard along the base of No. 1 LH and No. 1 RH stowage sleeves and outboard of the LH/RH sides of the stowage tray (Figure 34).

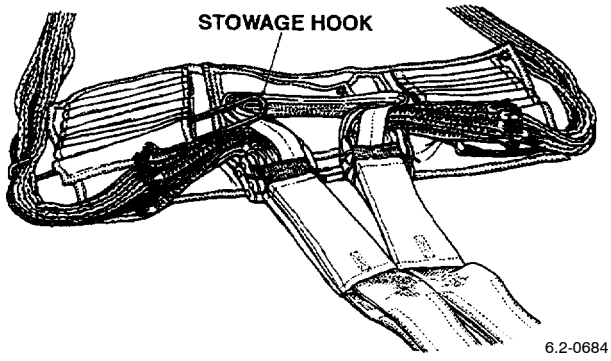

Figure 34. Stowing LH Group of Suspension Lines - Stage 1

CAUTION

To prevent damage to suspension line stowage tray sleeves make sure that suspension line stowage hook diameter does not exceed diameter of stowage tray sleeves.

f. Insert stowage hook into No. 1 LH stowage sleeve from inboard to outboard (Figure 34).

g. Stow the first bight of the LH group of suspension lines in sleeve No. 1 LH using the stowage hook. Make sure that the lines outside the base of No. 1 sleeve are taut and that bights protrude about 1/2 to 3/4-in. from inboard end (Figure 35).

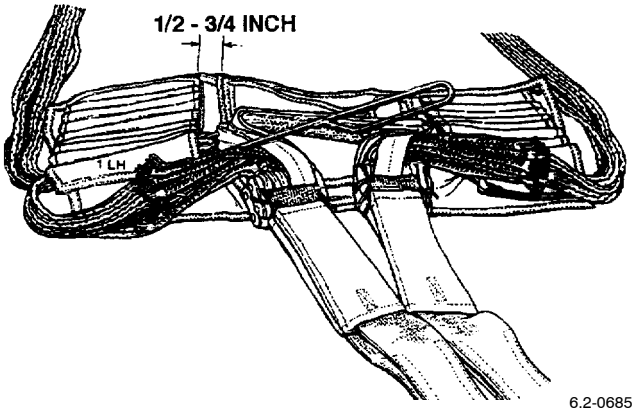

Figure 35. Stowing LH Suspension Lines - Stage 2

h. Repeat the procedure in Subparagraph g, keeping all outboard ends taut for No. 1 RH stowage sleeve, then 2 LH, 2 RH and so on until all sleeves are filled. This method keeps the suspension lines neat on the table and the stowage tray comes up to the deployment sleeve evenly (Figure 36). Suspension lines shall be 40 plus/minus 3-in. from last stow to stowage tray. (QA)

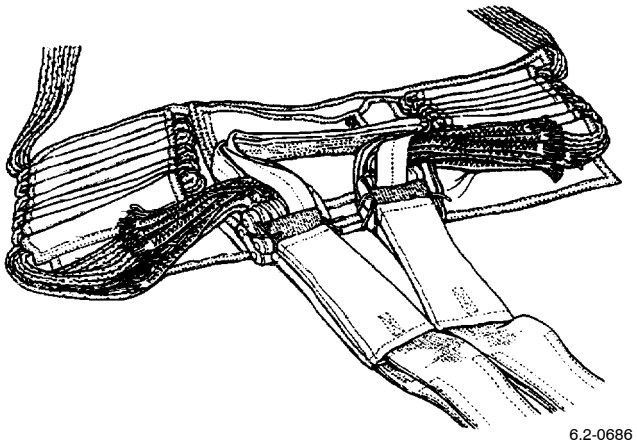

Figure 36. LH and RH Suspension Lines Stowed

i. Fold the LH and RH cover flaps over to cover the suspension line stowage sleeves.

j. Using size A thread single and waxed, tie tacking thru each corner of the suspension line stowage tray and cover flap eyelets; tie off (Figure 37). (QA)

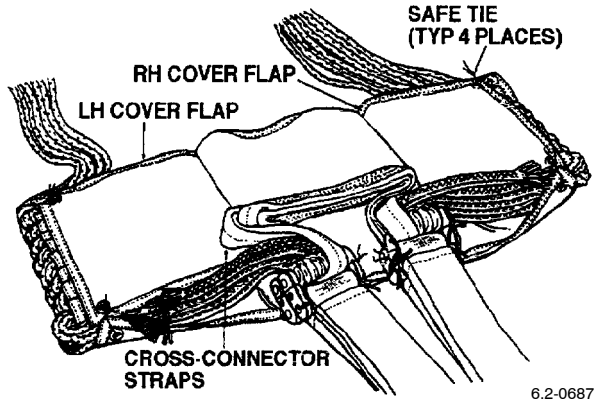

Figure 37. Suspension Line Stowage Cover Flaps Secured

k. Reposition the cross-connector straps on the stowage tray (Figure 37).

l. Install new riser covers on the LH and RH risers.

m. Fold the LH and RH stowage trays inboard to the vertical position (Figure 38).

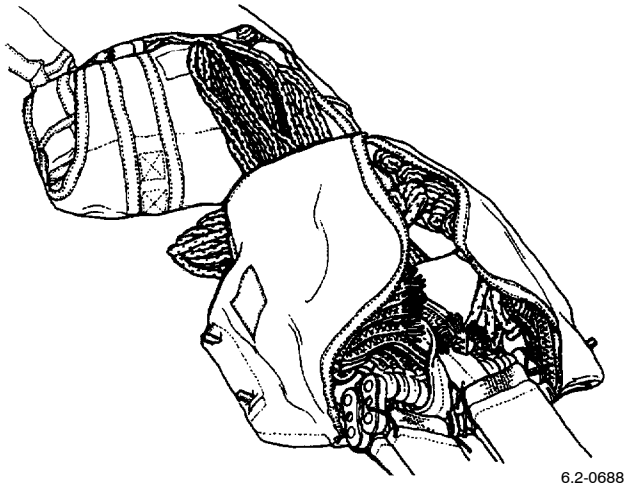

Figure 38. Suspension Line Stowage Trays Positioned Vertically

NOTE

The operations detailed in this WP require the assistance of a helper.

19. PREPARATION OF PARACHUTE ASSEMBLY FOR INSTALLATION INTO CONTAINER.

a. Make sure the parachute container protection cover assembly is outside the container. Fold over and temporarily secure using a tie of nylon cord Type 1 thru each flap eyelet and around the bottom container mounting brackets.

b. Position the parachute container on the packing table on a suitable rubber mat. Place aft downward open end towards deployment sleeve (Figure 39).

c. Lift the risers, position the container opening next to the suspension line stowage tray and lay the risers over the forward face of the container (Figure 39).

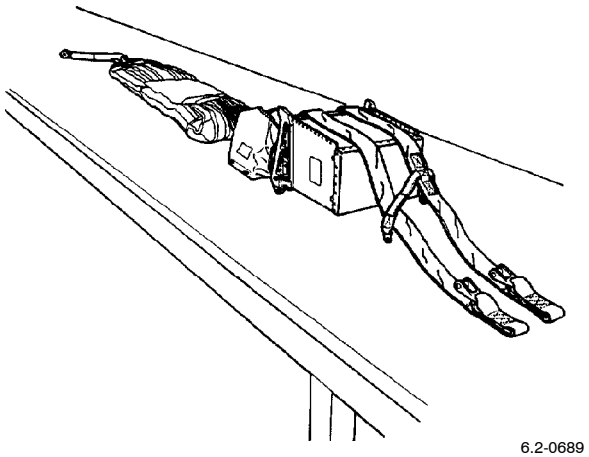

Figure 39. Parachute Container Positioned

20. INSTALLING STOWAGE TRAY IN CONTAINER.

a. Lift the stowage tray, position in the bottom of the container and locate the four securing studs into the holes in the lower LH/RH container sides (Figure 40).

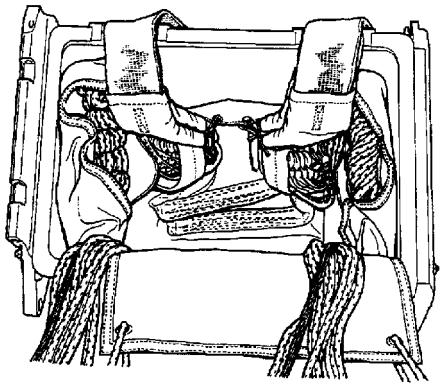

Figure 40. Stowage Tray Positioned in Container

b. With container on aft face, reinstall sealing washers and nuts to the stowage tray securing studs and torque 18 to 25 in-lbs (Figure 41). (QA)

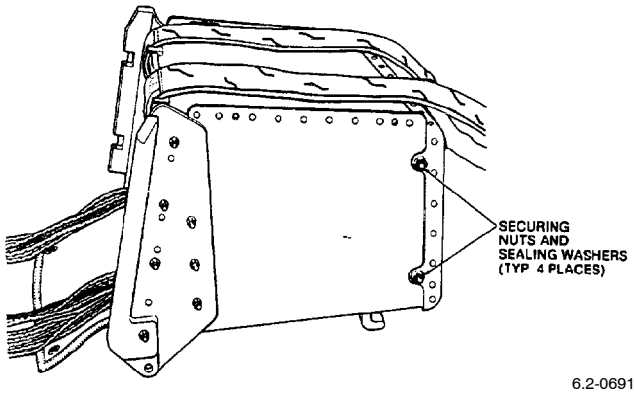

Figure 41. Stowage Tray Secured

c. Apply torque seal to the four securing nuts. (QA)

d. Turn container upright, position cross-connector straps side by side in bottom of container, connector links in lower forward edge of container (Figure 42).

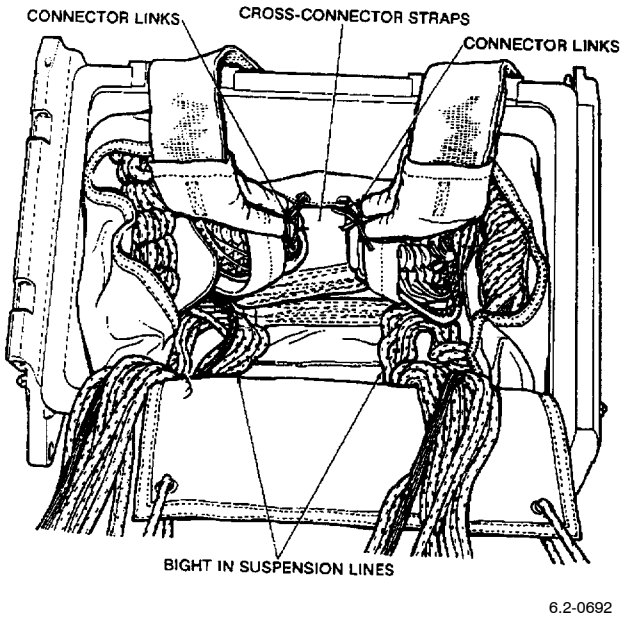

Figure 42. Cross-Connector Straps, Connector Links and Suspension Lines Positioned

e. Release cover flap ties from bottom mounting brackets. Place parachute container in packing box assembly (Figure 43).

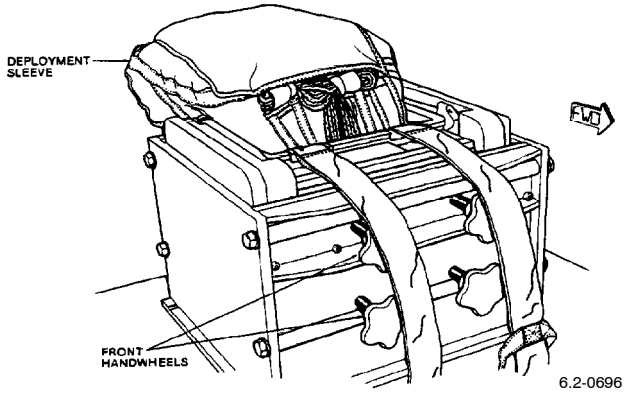

Figure 43. Parachute Pack Positioned in Packing Box Assembly

f. Position the LH support block (MBEU143002) and the rear support block (MBEU143004).

g. Install LH support packing block (MBEU149533).

h. Install the front support block (MBEU143003) lower cutaway towards parachute container and then the front support packing block (MBEU149535) between the front support block and packing box assembly. Tie parachute container protection cover to packing box assembly securing bolts.

i. Tighten the RH handwheels evenly and then the front handwheels. Do not overtighten. Apply only enough pressure to ensure that the parachute container is evenly supported.

j. Form a bight of the LH/RH groups and position the bight in the bottom of the container (Figure 44).

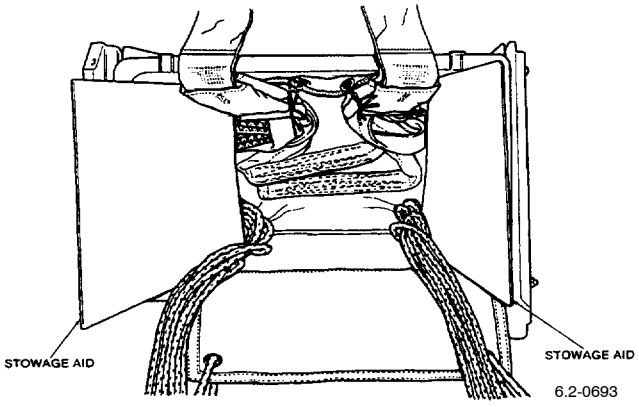

Figure 44. Deployment Sleeve Stowage Aids Positioned

k. Position the deployment sleeve stowage aids (MBEU149527) in the container LH/RH sides, locating them in the bight in the suspension lines and outboard of the connector links. Push down as far as possible (Figure 44).

21. POSITIONING DEPLOYMENT SLEEVE IN CONTAINER.

a. Position the deployment sleeve in the container opening, route the suspension lines down the center and stow in the rear of the container base as neatly as possible. Position riser covers (Figure 45).

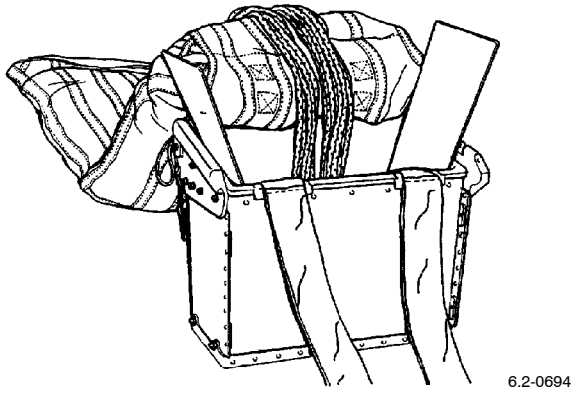

Figure 45. Deployment Sleeve Positioned in Container Opening

22. PRESSING DEPLOYMENT SLEEVE INTO CONTAINER.

a. Push the deployment sleeve down into the container as far as possible, locating the base of the sleeve in the bottom of the container (Figure 46 and 47).

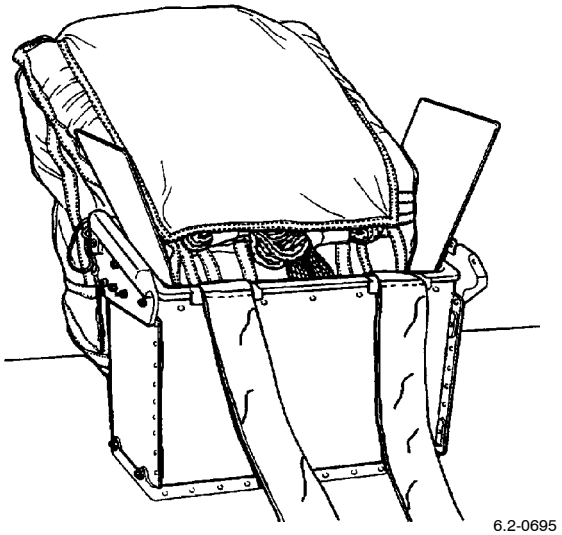

Figure 46. Deployment Sleeve Positioned in Container

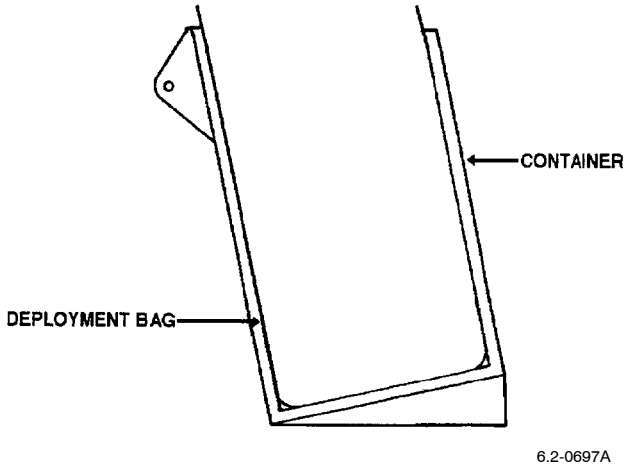

Figure 47. Stowing Deployment Sleeve - Stage 1

c. Fold forward and lay the sleeve over the forward edge of the container (Figure 48).

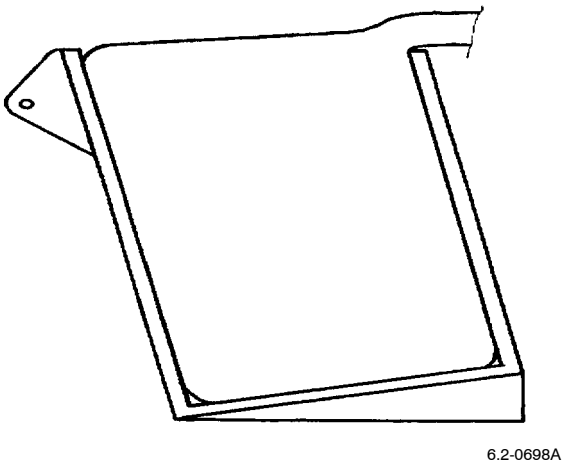

Figure 48. Stowing Deployment Sleeve - Stage 2

NOTE

Parachute assemblies may be left unattended in the SOAK mode out of normal working hours at the discretion of the users governing authority.

23. COMPRESSION STAGE 1.

NOTE

During the press operations use a combination of press packing block and loose packing block to suit the operation and the height of the operator. It is advantageous to keep the press table as low as possible.

a. Locate the short packing block (MBEU149008) in the press and secure with the quick-release pins.

b. Position the loose-large packing block (MBEU-149516) in the container, slightly aft of forward, align the packing box and blocks and raise the press table until the blocks are just in contact (Figure 49).

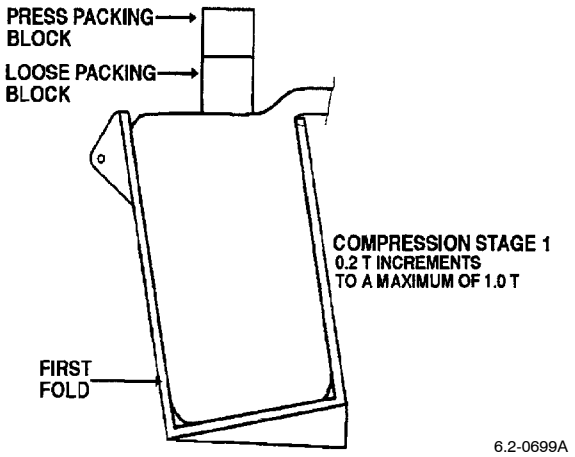

Figure 49. Compressing Deployment Sleeve - Stage 1

c. Make sure that the risers are located so that the riser cover abuts the rear of the container rubber seal and that riser webbings are located in the groove in the seal.

NOTE

When applying pressure it may be necessary to pull the risers up to maintain the correct position. The stitching line on the risers shall be maintained at about 1 in. forward of the forward edge of the container.

d. Make sure both press displays indicate 0.0 T's and SOAK selected OFF.

WARNING

Make sure the packing box and packing blocks are correctly aligned.

CAUTION

Make sure the packing box and packing blocks are correctly aligned, that packing blocks are not contacting the container and that the deployment sleeve is not trapped at the front of the container.

NOTE

During the following operations the helper shall support the sleeve and make sure that a gap is maintained between the sleeve and inner forward edge of the container.

e. Using the footpedal, apply a load of 1.0 T's, in 0.2 T increments, checking at intervals that the packing blocks are not contacting the container and that the sleeve is not trapped at the front of the container.

f. Using a long bar, tuck in the sleeve down the sides.

g. Leave the sleeve under pressure for a minimun 1 hr.

h. Fully lower the press table using the footbar and ensure that the load displays indicate 0.0 T's.

i. Remove the loose-large packing block (MBEU-149516) from the container.

24. COMPRESSION STAGE 2.

a. Fold the deployment sleeve to the rear and push down into the container as far as possible by hand, ensure that the fold is butted against the forward inside of the container (Figure 50).

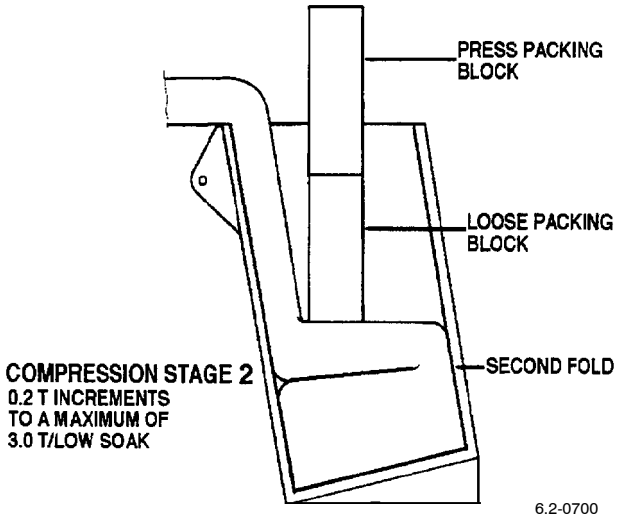

Figure 50. Compressing Deployment Sleeve - Stage 2

b. Position the loose-large packing block (MBEU-149516) in the container on the deployment sleeve, slightly forward of center. Align the support box and packing blocks and raise the press table until the blocks are just in contact (Figure 50).

WARNING

Make sure the packing box and packing blocks are correctly aligned.

CAUTION

Make sure the packing box and packing blocks are correctly aligned, that packing blocks are not contacting the container and that the deployment sleeve is not trapped at the rear of the container.

c. Using the footpedal, raise the press table to apply a load between 2.5 to 2.7 T's in increments of 0.2 T's. Check at intervals that the deployment sleeve is not trapped at the rear of the container.

d. Using a long bar, tuck in the sleeve down the sides of the container.

e. Select 'SOAK LOW' position and make sure that:

(1) Audio alarm sounds (4 sec) as it makes pressure adjustments.

(2) Displays indicate LOAD SET at 3.0 T's.

(3) Both indicator lights illuminate after alarm stops and press table starts to raise.

(4) Both displays indicate progressively increasing load up to a maximum of 3.3 T's.

f. Monitor the load indications which shall be between 2.8 T's and 3.3 T's.

g. Leave the assembly on 'SOAK LOW' for a minimum of 1 hr.

h. At intervals check the riser positions and length, adjusting as required by pulling on the risers to maintain the riser cover abutting the rear of the container rubber seal and the stitch line 1 in. forward of the container forward edge.

i. Select 'SOAK OFF' position and make sure that:

j. Position the loose-large packing block (MBEU-149516) in the container, slightly aft of center.

(1) Both indicator lights extinguish.

(2) Both displays, LOAD SET display indicates value extinguished; LOAD display indicates load applied.

k. Using the footbar, fully lower the press table.

l. Remove the loose-large packing block (MBEU-149516) from the container.

25. COMPRESSION STAGE 3.

a. Fold the deployment sleeve to the front, push down as flat as possible ensuring that the fold is abutting the aft face of the container (Figure 51).

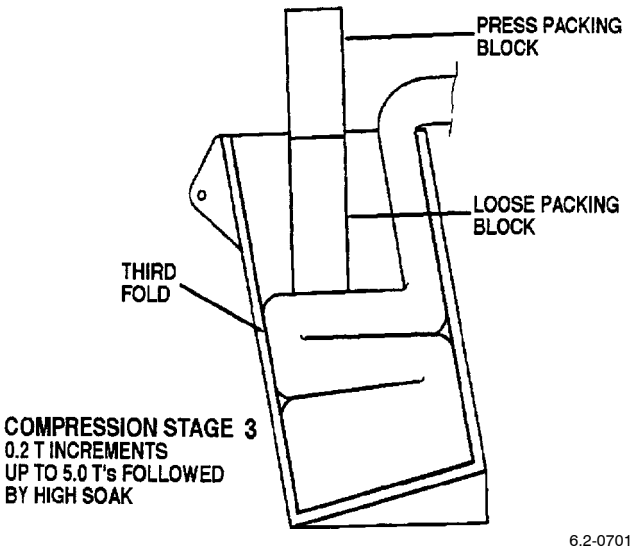

Figure 51. Compressing Deployment Sleeve - Stage 3

WARNING

Make sure the packing box and packing blocks are correctly aligned.

CAUTION

Make sure the packing box and packing blocks are correctly aligned, that packing blocks are not contacting the container and that the deployment sleeve is not trapped at the front of the container.

c. Make sure that the packing box and packing blocks are still aligned and that the sleeve is not trapped at the front of the container.

d. Using the footpedal, raise the press table until the packing blocks are just in contact, continue using the footpedal, raise the press table in increments of 0.2 T's until the displays indicate a LOAD of 4.8 to 5.5 T's. Check at intervals that the sleeve is not trapped, and tuck the sleeve down the sides as required.

e. Ensure that packers finger's can be inserted at the front, between the sleeve and the container. Check the position of the risers as the load is applied.

f. Select 'SOAK HIGH' position and make sure that:

(1) Audio alarm sounds (4 sec) as it makes pressure adjustments.

(2) Both displays indicate LOAD SET at 5.0 T's.

(3) After alarm stops, both indicator lights illuminate and press table starts to raise.

(4) Both displays indicate progressively increasing load up to a maximum of 5.3 T's.

g. Monitor the LOAD indications which shall be between 4.8 and 5.3 T's.

h. Leave the assembly on 'SOAK HIGH' for a minimum of 1 hr.

i. Select 'SOAK OFF' position and make sure that:

(1) Both indicator lights extinguish.

(2) Both displays; LOAD SET value extinguished; LOAD indicates load still applied.

j. Using the footbar, fully lower the press table. Displays will indicate 0.0 T's.

k. Remove the loose-large packing block (MBEU-149516).

l. Remove the two deployment sleeve stowage aids (MBEU149527) from the container.

26. COMPRESSION STAGE 4.

a. Fold the deployment sleeve to the rear, crease the sleeve at the rear and tuck well down into the container. Push the sleeve well down so that the fold is against the front of the container (Figure 52).

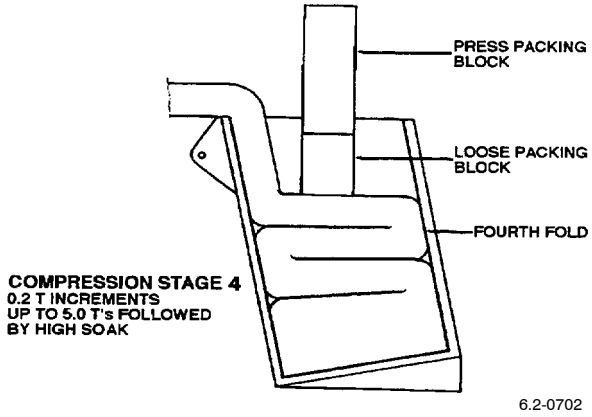

Figure 52. Compressing Deployment Sleeve - Stage 4

b. Position the loose-large packing block (MBEU-149516) in the container, slightly forward of center.

WARNING

Make sure the packing box and packing blocks are correctly aligned.

CAUTION

Make sure the packing box and packing blocks are correctly aligned, that packing blocks are not contacting the container and that the deployment sleeve is not trapped at the rear of the container.

c. Make sure the packing box and packing blocks are correctly aligned and using the footpedal, raise the press table until the packing blocks are just in contact (Figure 52).

d. Using the footpedal, raise the press table until the packing blocks are just in contact, continue using the footpedal, raise the press table in increments of 0.2 T's until the displays indicate a LOAD of 4.8 to 5.5 T's. Check at intervals that the sleeve is not trapped, and tuck the sleeve down the sides as required.

e. Ensure that packers finger's can be inserted at the front, between the sleeve and the container. Check the position of the risers as the load is applied.

f. Select 'SOAK HIGH' position and make sure that:

(1) Audio alarm sounds (4 sec) as it makes pressure adjustments.

(2) Both displays indicate LOAD SET at 5.0 T's.

(3) After alarm stops, both indicator lights illuminate and press table starts to raise.

(4) Both displays indicate progressively increasing load up to a maximum of 5.3 T's.

g. Monitor the LOAD indications which shall be between 4.8 and 5.3 T's.

h. Leave the assembly on 'SOAK HIGH' for a minimum of 1 hr.

i. Select 'SOAK OFF' position and make sure that:

(1) Both indicator lights extinguish.

(2) Both displays; LOAD SET value extinguished; LOAD indicates load still applied.

j. Using the footbar, fully lower the press table. Displays will indicate 0.0 T's.

k. Remove the short packing block (MBEU149008) and the loose large packing block (MBEU149516).

27. COMPRESSION STAGE 5.

a. Fold the deployment sleeve to the front, crease the sleeve at the front and tuck well down into the container. Push the sleeve well down and ensure that the fold at the rear abuts the rear face of the container (Figure 53).

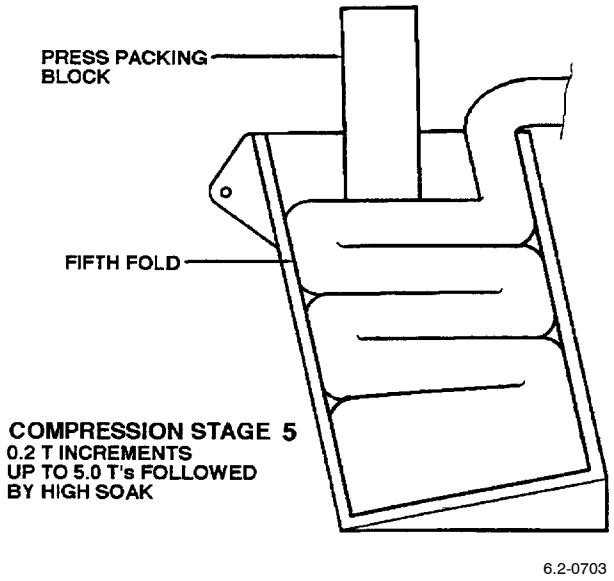

Figure 53. Compressing Deployment Sleeve - Stage 5

b. Locate the long packing block (MBEU149010) into the container slightly aft of center, and align the block and packing box, and using the footpedal, raise the press table until the packing block is in contact with the sleeve in the container (Figure 53).

WARNING

Make sure the packing box and packing blocks are correctly aligned.

CAUTION

Make sure the packing box and packing blocks are correctly aligned, that packing blocks are not contacting the container and that the deployment sleeve is not trapped at the front of the container.

c. Using the footpedal, raise the press table until the packing blocks are just in contact, continue using the footpedal, raise the press table in increments of 0.2 T's until the displays indicate a LOAD of 4.8 to 5.5 T's. Check at intervals that the sleeve is not trapped, and tuck the sleeve down the sides as required.

d. Ensure that packers finger's can be inserted at the front, between the sleeve and the container. Check the position of the risers as the load is applied.

e. Select 'SOAK HIGH' position and make sure that:

(1) Audio alarm sounds (4 sec) as it makes pressure adjustments.

(2) Both displays indicate LOAD SET at 5.0 T's.

(3) After alarm stops, both indicator lights illuminate and press table starts to raise.

(4) Both displays indicate progressively increasing load up to a maximum of 5.3 T's.

f. Monitor the LOAD indications which shall be between 4.8 and 5.3 T's.

g. Leave the assembly on 'SOAK HIGH' for a minimum of 1 hr.

h. Select SOAK OFF' position and make sure that:

(1) Both indicator lights extinguish.

(2) Both displays; LOAD SET value extinguished; LOAD indicates load still applied.

i. Using the footbar, fully lower the press table. Displays will indicate 0.0 T's.

NOTE

It is mandatory that either compression stage 6 or 7 be left overnight or a minimum of 12 hrs.

28. COMPRESSION STAGE 6.

a. Fold the deployment sleeve to the rear, crease the sleeve at the rear and tuck the sleeve in at the front and rear, leaving only the end of the sleeve and withdrawal line outside the rear of the container (Figure 54).

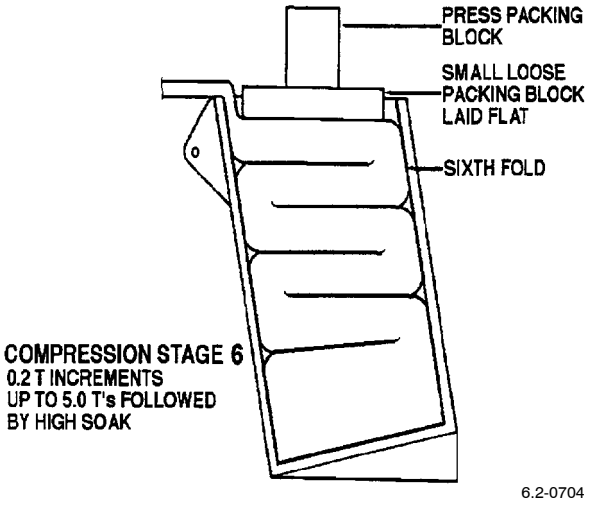

Figure 54. Compressing Deployment Sleeve - Stage 6

b. Position the loose-small packing block (MBEU-149526) flat on the sleeve ensuring that it is central and not in contact with the container (Figure 54).

WARNING

Make sure the packing box and packing blocks are correctly aligned.

CAUTION

Make sure the packing box and packing blocks are correctly aligned, that packing blocks are not contacting the container and that the deployment sleeve is not trapped at the rear of the container.

c. Using the footpedal, raise the press table until the packing blocks are just in contact, continue using the footpedal, raise the press table in increments of 0.2 T's until the displays indicate a LOAD of 4.8 to 5.5 T's. Check at intervals that the sleeve is not trapped, and tuck the sleeve down the sides as required.

d. Ensure that packers finger's can be inserted at the front, between the sleeve and the container. Check the position of the risers as the load is applied.

e. Select 'SOAK HIGH' position and make sure that:

(1) Audio alarm sounds (4 sec) as it makes pressure adjustments.

(2) Both displays indicate LOAD SET at 5.0 T's.

(3) After alarm stops, both indicator lights illuminate and press table starts to raise.

(4) Both displays indicate progressively increasing load up to a maximum of 5.3 T's.

f. Monitor the LOAD indications which shall be between 4.8 and 5.3 T's.

g. Leave the assembly on 'SOAK HIGH' for a minimum of 1 hr.

h. Select 'SOAK OFF' position and make sure that:

(1) Both indicator lights extinguish.

(2) Both displays; LOAD SET value extinguished; LOAD indicates load still applied.

i. Using the footbar, fully lower the press table. Displays will indicate 0.0 T's.

j. Remove the loose-small packing block (MBEU-149526).

29. COMPRESSION STAGE 7.

a. Fold the end of the sleeve to the front and position the withdrawal line with the ring laid flat (Figure 55).

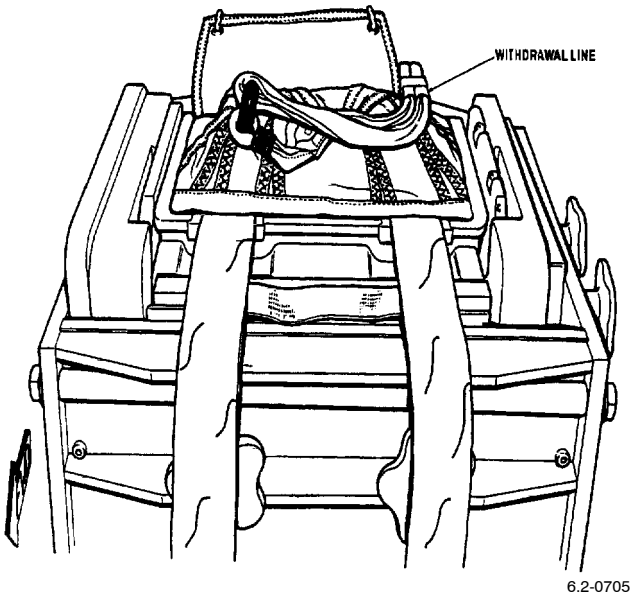

Figure 55. Withdrawal Line Positioned

b. Position the loose-withdrawal line packing block (MBEU149517) on top of the withdrawal line with the cutout adjacent to the withdrawal line spool in the RH rear corner (Figure 56).

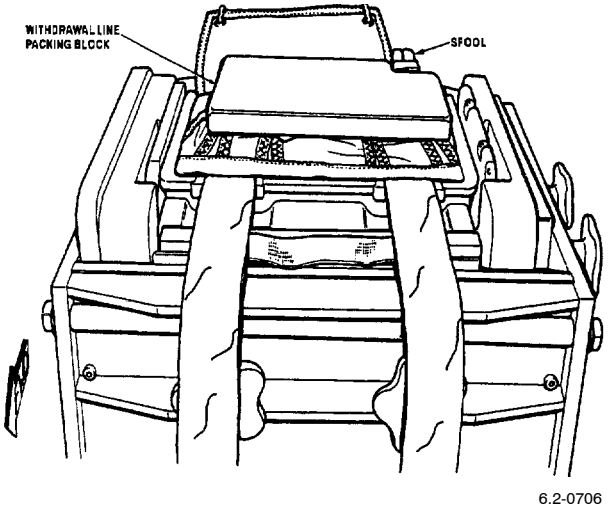

Figure 56. Withdrawal Line Packing Block Positioned

c. Position the loose-small packing block (MBEU149526) on top of the loose-withdrawal line packing block (MBEU149517) (Figure 57).

WARNING

Make sure the packing box and packing blocks are correctly aligned.

WARNING

Make sure the packing box and packing blocks are correctly aligned, that packing blocks are not contacting the container and that the deployment sleeve is not trapped at the rear of the container.

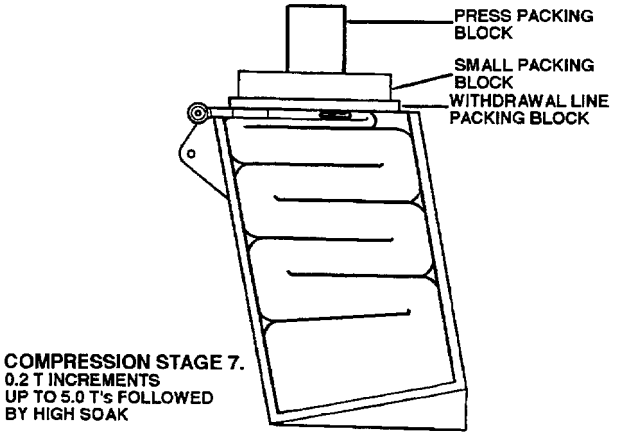

Figure 57. Compressing Deployment Sleeve - Stage 7

d. Using the footpedal, raise the press table until the packing blocks are just in contact, continue using the footpedal, raise the press table in increments of 0.2 T's until the displays indicate a LOAD of 4.8 to 5.5 T's. Check at intervals that the sleeve is not trapped, and tuck the sleeve down the sides as required.

e. Ensure that packers finger's can be inserted at the front, between the sleeve and the container. Check the position of the risers as the load is applied.

f. Select 'SOAK HIGH' position and make sure that:

(1) Audio alarm sounds (4 sec) as it makes pressure adjustments.

(2) Both displays indicate LOAD SET at 5.0 T's.

(3) After alarm stops, both indicator lights illuminate and press table starts to raise.

(4) Both displays indicate progressively increasing load up to a maximum of 5.3 T's.

g. Monitor the LOAD indications which shall be between 4.8 and 5.3 T's.

h. Leave the assembly on 'SOAK HIGH' for a minimum of 1 hr.

i. Select 'SOAK OFF' position and make sure that:

(1) Both indicator lights extinguish.

(2) Both displays; LOAD SET value extinguished; LOAD indicates load still applied.

j. Using the footbar, fully lower the press table. Displays will indicate 0.0 T's.

k. Remove the loose-small packing block (MBEU149526) and the loose-withdrawal line packing block (MBEU149517).

30. INSTALLING CONTAINER LID.

a. Prepare the lid by applying technical talc to the lip of the rubber seal. Also apply technical talc to the rubber seal on the withdrawal line (Figure 58).

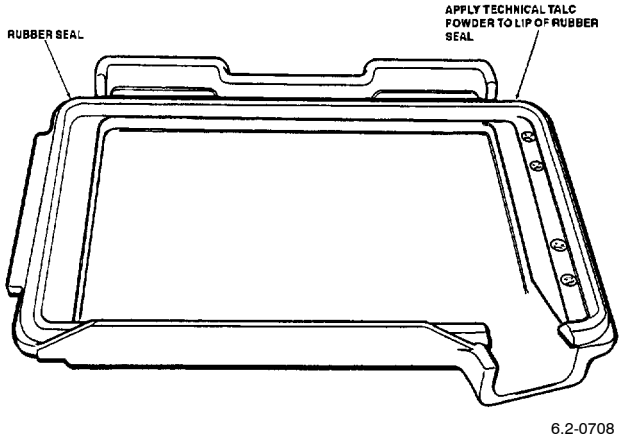

Figure 58. Parachute Container Lid

b. Fold down the protection cover, pulling the cords forward and routing them outboard of the risers (Figure 59).

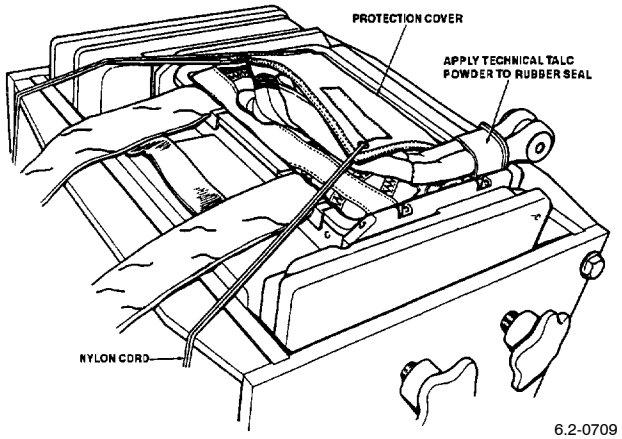

Figure 59. Protection Cover Positioned

c. Install rubber seal of the withdrawal line into the lid. Install lid on LH side of container, install lid into groove of container, as far as possible, press down and place padded block flat on lid. Place loose-small packing block (MBEU149526) on top of padded block. Align padded block and loose-small packing block (MBEU149526) aft and on right side (Figure 60).

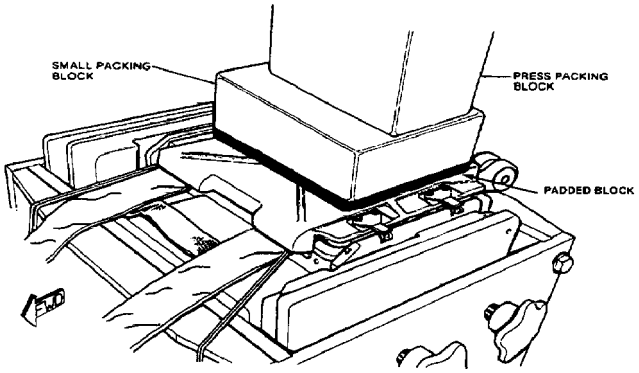

Figure 60. Closing Lid - Stage 1

CAUTION

To prevent possible damage to lid and/or rim of container make sure lid is correctly positioned.

d. Install block aft and on right side. Carefully raise press table using footpedal until blocks are just in contact. Make sure the protection cover panel cords are routed outboard of risers and that withdrawal line is located correctly in rear of container. Using the footpedal apply gentle pressure to lid (Figure 60).

e. Insert lid fitting wedge down RH side of lid, flat side inboard and make sure lugs are located so that they will engage in slots in container, if necessary tap lid to rear to locate. Pull nylon cords to make sure the protection cover panel is fully forward and remove cords (Figure 61). (QA)

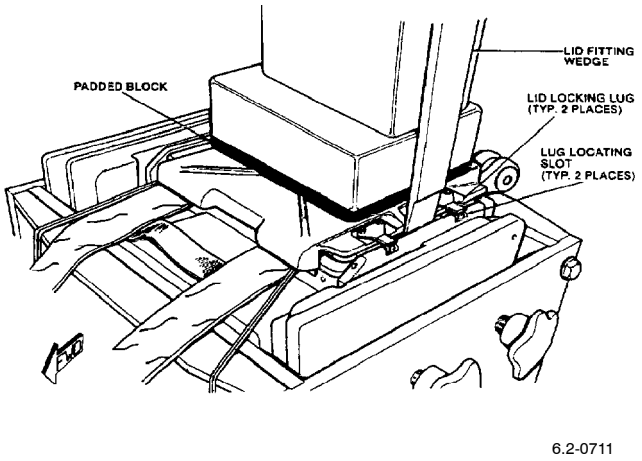

Figure 61. Closing Lid - Stage 2

WARNING

Make sure the packing box and packing blocks are correctly aligned.

CAUTION

Extreme care must be taken, when applying pressure to engage the lugs into the slots. There is a possibility to bend the parachute container when too much pressure is applied.

f. Using the footpedal, carefully apply pressure until the lugs are fully engaged in the slots and at the same time ensuring that the withdrawal line and riser seals are correctly located. (QA)

g. Secure the lid by inserting the securing pin from the rear (Figure 62). (QA)

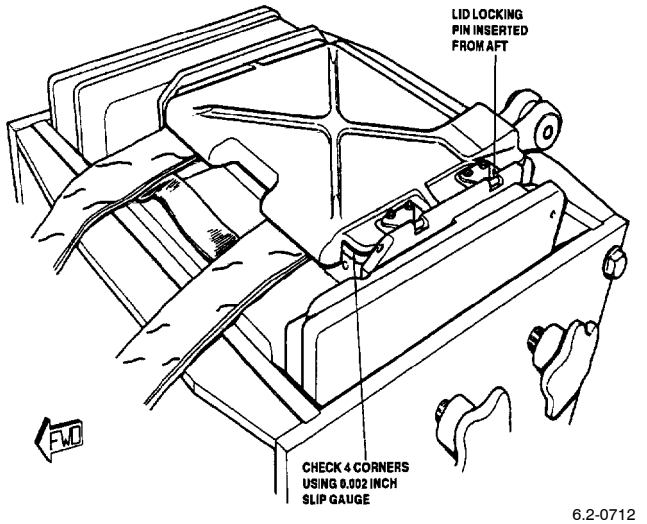

Figure 62. Parachute Container Lid Closed

h. Lower the press table to release the pressure and remove the loose-small packing block (MBEU149526) and the loose-large packing block (MBEU149010).

i. Using a 0.002 in. slip gauge check that there are no gaps at each corner of the pack (gauge should not enter). If gauge enters, remove the lid and recompress the deployment sleeve until the fitted lid parameters are met (Figure 62). (QA)

j. Release front and side handwheels fully, remove the front support packing block (MBEU139535) and front support block (MBEU143003), LH support packing block (MBEU149533).

k. Remove the parachute assembly from the support box and place on a suitable rubber mat on the packing table, face down.

NOTE

If socket will not fit on the bolt, align lid with the lid fitting wedge (MBEU149534).

l. Fit the lid locking pin securing bolt and torque to a value of 23 to 27 in-lbs. Apply torque seal to the locking pin securing bolt (Figure 63) (QA).

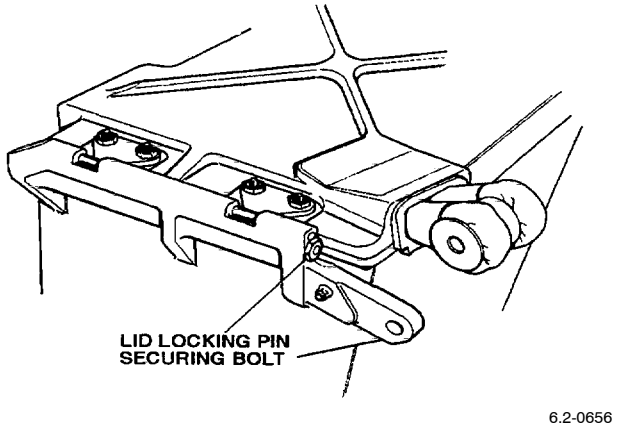

Figure 63. Lid Locking Pin Securing Bolt Fitted

31. PARACHUTE HARNESS SENSING RELEASE UNIT (PHSRU), MXU-746/P AND MXU-747/P.

a. Measure the knurled actuating lever torque as follows:

(1) Hold locking lever in the open position and insert the torque meter with 1/16-in. hex head driver into actuating lever cavity.

(2) Rotate actuating lever to just prior to contact with body. Acceptable torque values are 28 to 50 in-oz. (Figure 64). (QA)

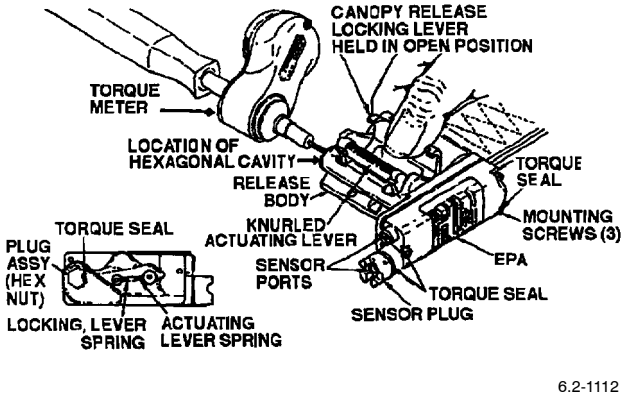

Figure 64. Rotate Actuating Lever

b. Check battery voltage as follows:

(1) Install test leads in multimeter observing proper polarity.

(2) Select VDC and scale exceeding 26 VDC.

CAUTION

Avoid touching the meter probes together when making this test. Firing of the PHSRU may result.

(3) Contact negative (black) probe to sensor plug assembly center conductor. Contact positive (red) probe to EPA sensor center conductor.

(4) Reading of +22.5 volts DC or greater indicates PHSRU is serviceable. (QA)

c. If plug assembly was removed, perform the following:

(1) Forward complete packed parachute assembly to either non-destructive inspection lab or medical facility for X-ray.

(2) From review of X-ray (Figure 65), if plug assembly is suspected or known to be partially or fully recessed, the unit shall have a shear pin integrity check per WP 024 02.

(3) Record inspection on Parachute Record (OPNAV 4790/101).

(4) Attach X-rays to the Parachute Record (OPNAV 4790/101).

(5) If voltage is below +22.5 volts DC, replace battery per WP 024 02.

(6) Record voltage for each EPA in the Local Use Block on the Parachute Record (OPNAV 4790/101).

32. FINAL CHECKOUT.

a. Turn the parachute assembly over and lay face up on the rubber mat.

b. Fit the headpad and secure with the four bolts and torque bolts to 20 in-lbs.

c. Route the risers down the front of the headpad and secure with the hook and pile fastener.

d. Insure that riser covers are tight against lid so no riser is exposed.

e. Account for all packing tools. (QA)

f. Inspect packed parachute assembly for general condition. (QA)

g. Packer shall complete and sign Parachute Record (OPNAV 4790/101). (QA)

h. QA inspector shall inspect completeness and accuracy of all entries on Parachute Record (OPNAV 4790/101).

i. QA inspector shall sign Parachute Record (OPNAV 4790/101).

j. Lower table to the lowest point and unplug from electrical source (if possible). Secure packing press.

k. Send a (legible) copy of new Parachute Record to: Commander, Code 461000D, NAVAIRWARCENWPNDIV, 1900 N Knox Road Stop 6206, China Lake, CA 93555-6106.

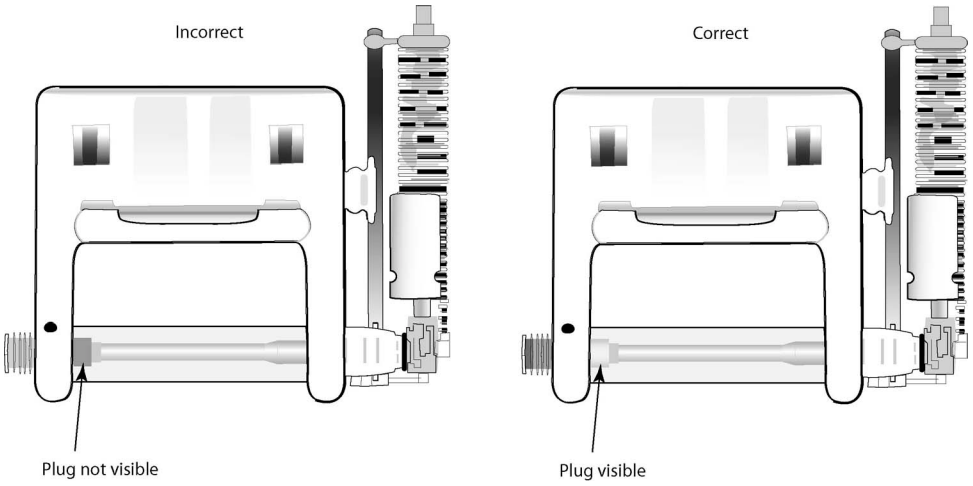

Figure 65. PHSRU X-Ray

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INTERMEDIATE MAINTENANCE

REPAIR PROCEDURES

A/P28S-32 PERSONNEL PARACHUTE ASSEMBLY

PART NUMBERS MBEU147710, MBEU147710-1, MBEU147711, MBEU147712, MBEU147713, and MBEU148030

List of Effective Work Package Pages

Page No.	Chg. No.	Page No.	Chg. No.	Page No.	Chg. No.	Page No.	Chg. No.
1 thru 9	9						

Reference Material

Alphabetical Index

Record of Applicable Technical Directives

Type/No.	Date	Title and ECP No.	Date Inc.	Rescission Date
ACC 629	11 Sept 97	SJU-17(V)1-A Canopy Breaker	1 Jun 98	31 Dec 2002

1. INTRODUCTION.

a. This work package (WP) contains instructions for the maintenance, repair, replacement and fabrication of various parachute parts or subassemblies to ensure that appropriate items of equipment remain in a ready-for-issue (RFI) status. For common repairs refer to WP 004 00.

2. REPLACEMENT OF RISER ASSEMBLY.

Materials Required

Specification or Part Number	Nomenclature
F-900 Torque Seal (Color Optional)	Sealing Compound
V-T-295	Thread, Nylon, Size A, Type I or II, Class A

NOTE

Tie off all tackings with a surgeon's knot topped with a square knot, followed with a binder knot per WP 002 00. Trim off excess leaving 1/2-in.

a. Lay the canopy/risers assembly on the packing table, risers front uppermost and canopy gores 10 and 11 on top. Attach the canopy apex to the table hook. Disconnect the lower steering lines as follows:

(1) Separate the front and rear risers to gain access to the lower steering lines.

(2) Cut and remove the scarlet thread ties securing the steering lines to the front risers.

(3) Remove the steering line handle tab from riser loop. Separate the eye in the steering line from the loop on the riser (Figure 1).

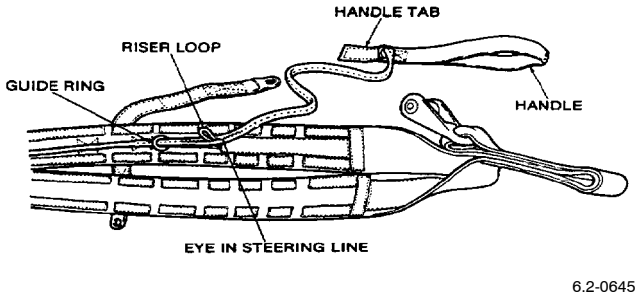

Figure 1. Location of Eye in Lower Steering Line

(4) Remove the steering line handle from the steering line.

(5) Pull the steering lines back thru the metal guide rings on each front riser until they are clear of the risers.

(6) Remove the lower steering lines from the upper steering lines by disconnecting at the upper steering line metal ring.

b. Loosen the upper right hand (RH) connector link, slide serrated plate forward and remove. Remove old riser. Install new riser ensuring that the inertia reel fitting is facing up and the risers are not twisted (Figure 2). Reinstall serrated plate. Ensure that serrated edge is facing up. Slide serrated plate into locking position. Tighten screw.

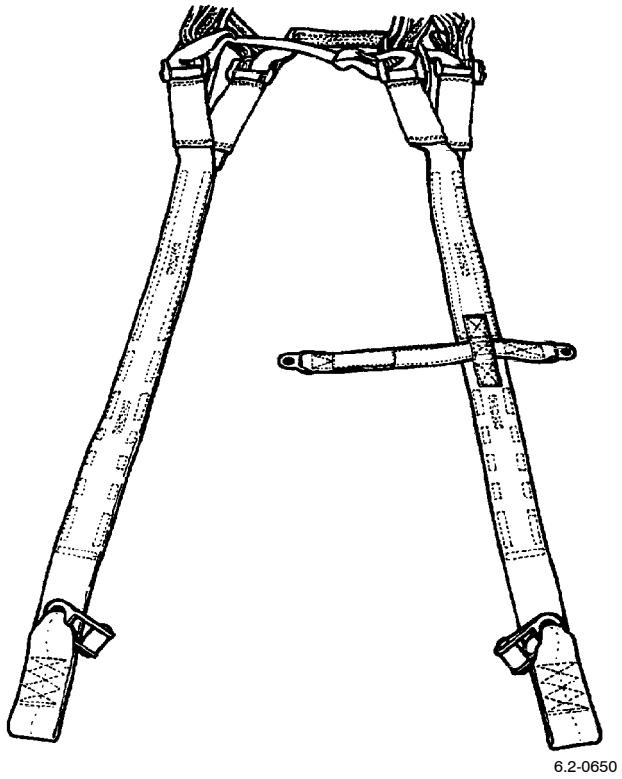

Figure 2. Risers Complete with Steering Lines

c. Loosen the lower right hand (RH) connector link, slide serrated plate forward and remove. Remove old riser. Install new riser ensuring that the inertia reel fitting is facing up and the risers are not twisted (Figure 2). Reinstall serrated plate. Ensure that serrated edge is facing up. Slide serrated plate into locking position. Tighten screw.

d. Attach lower steering line thru upper steering line metal ring with larks head knot. Ensure that the lower steering line eye is at the opposite end. Route lower steering line thru the three metal guide rings on the riser. Insert riser loop thru lower steering line eye. Attach steering line handle to steering line. Replace steering line handle tab thru the steering line riser loop. Tack loop to riser with one turn of size A thread single. Tie off. Attach the front and rear risers, ensuring the lower steering line is not outside the riser.

e. Repeat step b for the upper left hand (LH) (front) riser, cross-connector strap and suspension lines 6 thru 10.

f. Repeat step c for the lower left hand (LH) (rear) riser, cross-connector strap and suspension lines 1 thru 5.

g. Repeat step d to reconnect the left hand (LH) lower steering line.

h. Torque connector link screw to 20 to 25 in-lbs.

i. Apply a torque seal to screwheads. (QA)

j. Install PHSRU per WP 024 01.

3. REPLACEMENT OF CANOPY ASSEMBLY.

Materials Required

Specification or Part Number	Nomenclature
F-900 Torque Seal (Color Optional)	Sealing Compound
V-T-295	Thread, Nylon Size A, Type I or II Class A

a. Lay the canopy/risers assembly on the packing table, risers front uppermost and canopy gores 10 and 11 on top. Attach the canopy apex to the packing table hook. Disconnect the lower steering lines as follows:

(1) Loosen the connector links, slide serrated plate forward and remove. Remove the canopy suspension lines from the links.

(2) Dispose of canopy per current supply directives.

(3) Lay the replacement canopy on the packing table with gores 10 and 11 uppermost and attach the apex to the table hook.

b. Attach lower RH (rear) canopy suspension lines, 1 thru 5, (Figure 3), to connector link one at a time. Ensure that the heat sealed end of the cross-connector strap is to the right and facing up. Pass the loop of the cross-connector strap over the link. Reinstall the serrated plate, ensuring the serrated edge is facing up. Slide serrated plate to locking position. Tighten screw.

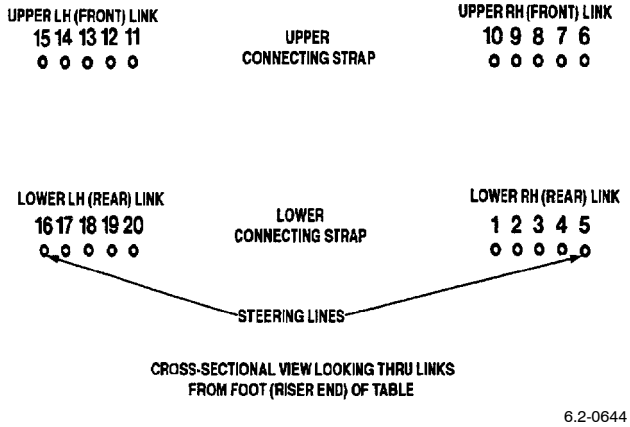

Figure 3. Suspension Line to Attachment Link Sequence

c. Attach upper RH (front) canopy suspension lines 6 thru 10 (Figure 3), to connector link one at a time. Ensure that the heat sealed end of the cross-connector strap is to the right and facing down. Pass the loop of the cross-connector strap over the link. Reinstall the serrated plate, ensuring the serrated edge is facing up. Slide serrated plate to locking position. Tighten screw.

d. Repeat step c for the upper LH (front) riser, cross-connector strap and suspension lines 11 to 15.

e. Repeat step b for the lower LH (rear) riser, cross-connector strap and suspension lines 16 thru 20.

f. Perform suspension line continuity check per Figure 3. (QA)

g. Torque connector link screw to 20 to 25 in-lbs. (QA)

h. Apply a torque seal to screwheads. (QA)

i. Fit the lower steering lines and upper steering lines per Paragraph 2.

4. INSTALLATION OF PARACHUTE HARNESS SENSING RELEASE UNITS.

a. Install per WP 024 01.

5. REPLACEMENT OF DEPLOYMENT SLEEVE WITHDRAWAL LINE.

Materials Required

Specification or Part Number	Nomenclature
MIL-T-50036A	Talc, Technical

a. Lay the deployment sleeve flat with the mouthlocks side uppermost.

b. Slide the withdrawal line rubber sleeve clear of clamp (Figure 4).

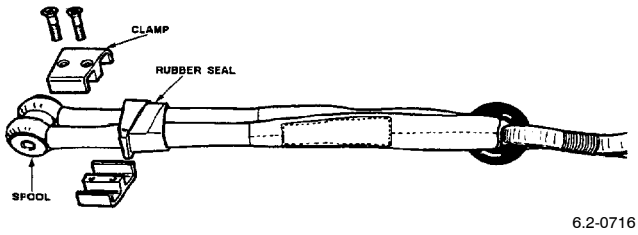

Figure 4. Seal and Spool fitted to Withdrawal Line

c. Remove the two screws and the two clamp halves (Figure 4).

d. Slide the withdrawal line rubber protection sleeves away from the spool and remove the loops from the spool (Figure 5).

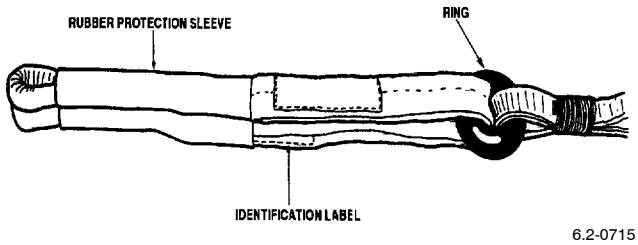

Figure 5. Withdrawal Line Located

e. Remove the withdrawal line from the deployment sleeve ring and discard (Figure 5).

f. Locate the replacement withdrawal line thru the ring of the deployment sleeve, ensuring that the identification label is uppermost (Figure 5).

g. With the two end loops aligned and laid flat, fit the rubber protection seal over the loops on to the withdrawal line (Figure 4).

h. Fit one side of the double spool into the lower loop of the withdrawal line and then fit the upper loop onto the remaining half of the double spool. Pull the withdrawal line rubber protection sleeves towards the loops, closing the loops and choking the spool.

i. Fit the two clamp halves, square ends adjacent to the spool end and the half with the countersunk screw holes uppermost (Figure 4).

j. Install the two clamp securing screws, loosely at this stage, so that the clamp can be moved along the withdrawal line.

k. Position the clamp so that the edge nearest the spool is 1 1/8-in. ± 1/8-in. from the centerline of the spool and tighten the bolts (Figure 6).

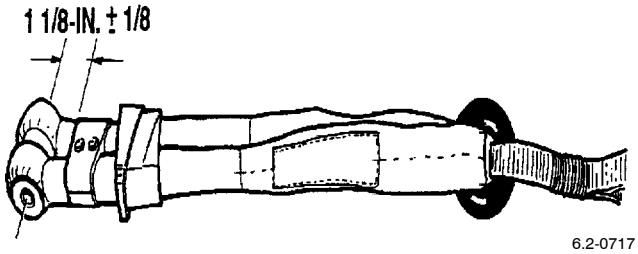

Figure 6. Clamp Attached to Withdrawal Line

l. Apply talc technical to the line protectors, clamp and seal and slide the seal into position on the clamp (Figure 7).

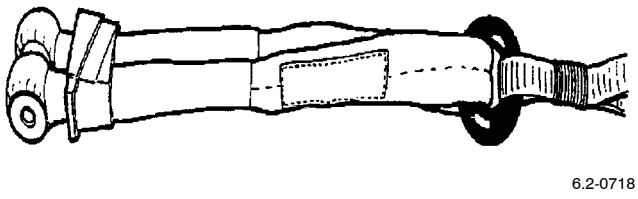

Figure 7. Seal Positioned Over Clamp

6. REPLACEMENT OF SCOTCHCAL LABEL.

Materials Required

Specification or Part Number	Nomenclature
—	Cloth Wipers
P-D-680, Type 2	Solvent, Dry Cleaning
—	Approved Solvent

a. Scotchcal Labels. Replace Scotchcal labels as follows:

(1) Saturate a paper towel or cloth wiper with an approved dry cleaning solvent and place over the label to be removed for 3 to 4 min.

(2) Remove the saturated material and most of the label. Clean off any residue then clean the surface using a clean wiper moistened with the solvent. Wipe the surface dry before the solvent evaporates.

(3) Ensure fingers do not contact the cleaned surface.

(4) Remove the protective paper from the adhesive side of the replacement label. Do not contaminate the adhesive surface.

(5) Position one edge of the label on the mounting surface and progressively work the remainder down to the opposite edge.

(6) Press the label firmly to the surface, applying pressure to the entire face and paying particular attention to the edges and corners.

(7) If wrinkles, bubbles or distortion are evident, remove the label and replace with a new label.

7. REPLACEMENT OF METALCAL LABEL.

Materials Required

Specification or Part Number	Nomenclature
—	Cloth wipers
P-D-680, Type 2	Solvent, Dry Cleaning
—	Approved Solvent

a. Metalcal labels. Replace metalcal labels as follows:

(1) Remove the old label, clean the mounting surface using an approved dry cleaning solvent, and while the surface is still wet, wipe thoroughly with a clean, dry wiper.

(2) Place the new label on a flat surface, stamp the relevant information on the label and roll out the label on both sides to remove the indentations caused by stamping.

(3) Hold the Metalcal on the edges and peel away the backing paper, taking care not to let the fingers come into contact with the adhesive.

(4) Fit the label to the part in the required position and press firmly in place using a roller, firm hand pressure or other suitable means which does not damage the face of the label. Apply pressure over the entire surface, paying particular attention to the edges and corners.

8. REPLACEMENT OF CONTAINER PANEL ASSEMBLY.

a. Defective container panel assemblies may be replaced as follows:

(1) Remove the five locking nuts from the panel securing studs and remove the panel assembly.

NOTE

Replacement panels are supplied complete with integral stud plates.

(2) Locate the replacement panel on the container, free end downward, fit the securing nuts and torque 16 to 23 in.-lbs.

(3) Treat ends of studs, nuts and any damaged painted areas as detailed in Paragraph 9.

9. REPAIR TO PAINT FINISH.

Materials Required

Specification or Part Number	Nomenclature
—	Soft Brush
MIL-P-85582	Primer, Epoxy, Waterborne
MIL-C-85285B	Paint, Polyurethane, Type 1, Lusterless, Black
	or
MIL-P-23377	Primer, Epoxy
MIL-C-83286	Paint, Polyurethane, Flat, Black

a. Minor damage to painted areas may be repaired as follows:

WARNING

Epoxy primer and polyurethane paint are flammable and toxic to eyes, skin and respiratory tract. Skin/ eye protection required. Avoid repeated/prolonged contact. Use only in well ventilated areas. Keep away from open flame or other sources of ignition.

(1) Touch up chipped/damaged paint areas using primer and polyurethane paint with brush only. Take care that paint does not contaminate container interior or fabric parts.

10. MODIFICATION OF UPPER RISER COVER.

Materials Required

Specification or Part Number	Nomenclature
PIA-W-4088	Webbing, Nylon OD, Type IX, 3-in., Class 1, 1A, or 2
V-T-295	Thread, Nylon, Size E, Type I or II, Class A

a. Remove new riser covers from package.

b. Cut 3-in. length of 3-in. webbing. Sear cut ends.

c. On connector link cover end, mark 1 1/2-in. from end.

d. On riser cover, fastener pile side, lay 3-in. length of webbing, on seared end at mark on riser cover, with excess length toward connector link.

e. Sew a 1/2-in. box-X, 1/8-in. from webbing edge, using size E thread, backstitch 1/2-in.

f. Repeat steps b thru e for opposite cover.

g. During installation of riser covers on risers, remove headpad and route 3-in. wide webbing under cover lid lip.

h. Install headpad.

11. FABRICATION AND INSTALLATION OF LOWER RISER COVER.

Support Equipment Required

Part Number	Nomenclature
—	Hot Knife
—	Shears
—	Square

Materials Required

Specification or Part Number	Nomenclature
MIL-C-7219	Cloth, Nylon Type III, Class 1 Sage Green
MIL-F-21840	Fastener Tape, Hook, 5/8-in. Wide, Type II, Class 1, Sage Green
MIL-F-21840	Fastener Tape, Pile 5/8-in. Wide, Type II, Class 1, Sage Green
V-T-295	Thread, Nylon, Size E, Type I or II, Class A, Sage Green

NOTE

If several riser covers are to be manufactured, it is recommended that a flat pattern (Template) be fabricated to ensure consistent repeatability.

a. Lay out a 15 1/4 x 5-in. rectangle (Figure 8).

b. On the bottom left side measure and mark in 4 3/8-in. Repeat procedure on the top line.

c. Using square and starting on the bottom line, at the 4 3/8-in. mark, measure up 3/8-in.

d. Using square, on the top line, at the 4 3/8-in. mark, measure down 3/8-in.

e. On the far right side, measure and mark 3/8-in. from top and 3/8-in. from the bottom.

f. Using straight edge, connect the top 3/8-in. marks.

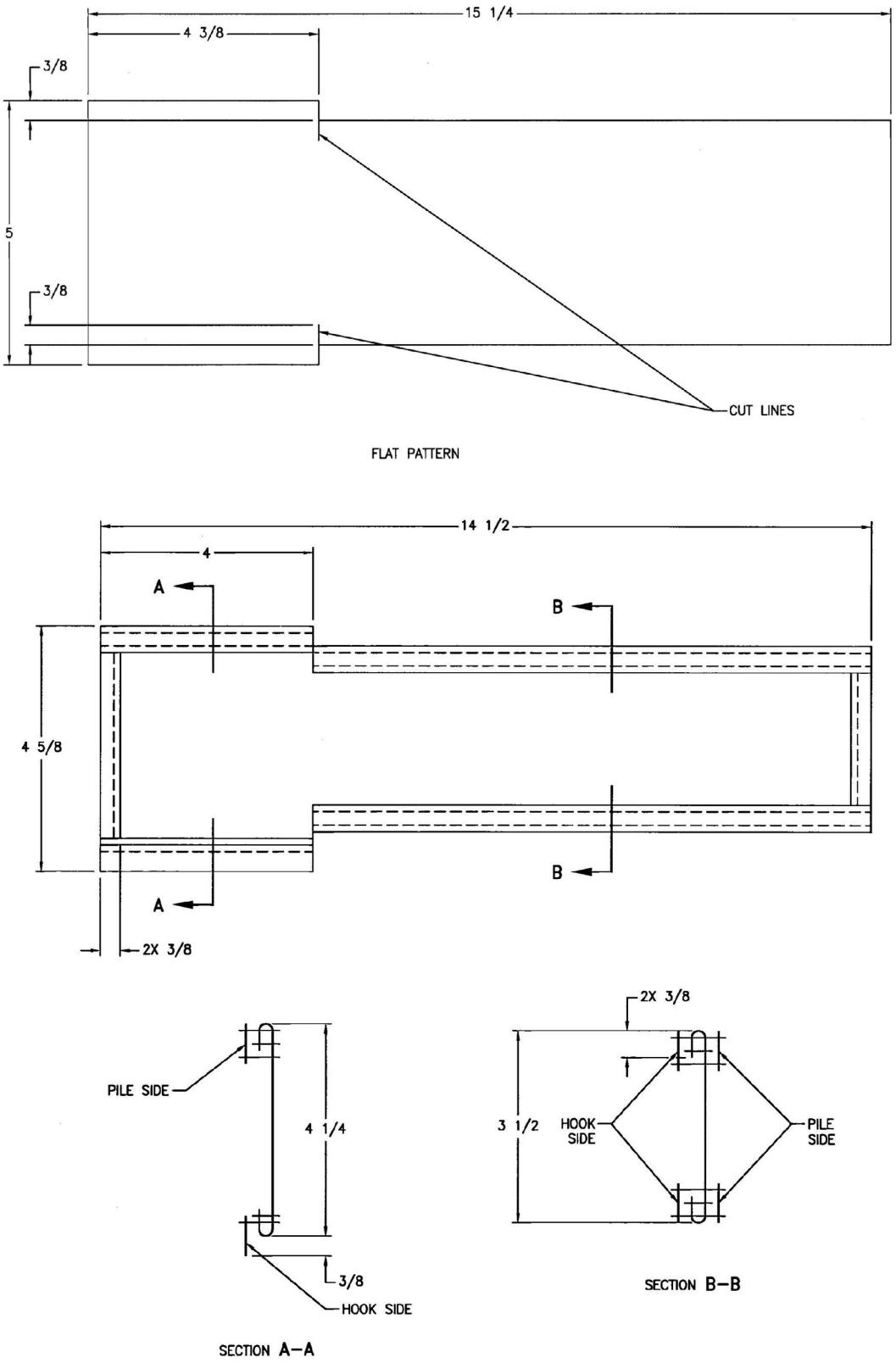

Figure 8. Lower Riser Cover Fabrication

g. Using straight edge, connect the bottom 3/8-in. marks.

h. Using hot knife and straight edge sear cut on lines measured and drawn in the above steps.

i. At the 4 3/8-in. mark, sear cut a slit an additional 3/8-in. down from top and up from bottom. This is to allow the outside edges to be folded.

j. Fold edges over 3/8-in. and sew 1/16-in. from seared edge.

k. Cut two pieces of 5/8-in. hook fastener tape 10-in. long. With folded side up, starting at the 3/8-in. slit, place fastener tape 1/16-in. from top edge and sew in place with a box stitch. Box stitch should be 1/16-in. inboard of fastener tape.

l. Repeat step k for bottom edge.

m. Cut two pieces of 5/8-in. pile fastener tape 10-in. long. With folded side down, starting at the 3/8-in. slit, place fastener tape 1/16-in. from top edge and sew in place with a box stitch. Box stitch should be 1/16-in. inboard of fastener tape.

n. Repeat step m for bottom edge.

o. Cut a 4-in. piece of pile fastener tape. Place fastener tape 1/16-in. from top left edge and sew down with "E" thread. Box stitch should be 1/16-in. inboard of fastener tape.

p. Cut a 4-in. piece of hook fastener tape. Place the top edge of fastener tape, hook side facing fold, 1/8-in. from bottom left edge. Sew in place with single stitch, backstitch 1/2-in. each end.

q. Installation:

(1) At Parachute Harness Sensing Release Unit (PHSRU) end of riser, separate front and rear riser.

(2) Starting with larger riser end, install lower riser cover on each rear riser by mating pile fastener on cover to hook fastener on riser webbing.

(3) Ensure the lower riser cover is installed as close as possible to the riser stitching that secures the chaff webbing to the riser loop end.

(4) Ensure the hook and pile fasteners on lower riser cover and rear risers are mated.

(5) Join front and rear riser webbing together.

12. INSTALLATION OF LOWER RISER COVER.

Materials Required

Specification or Part Number	Nomenclature
1979AS500-100	Riser Cover Assembly

NOTE

One parachute riser cover, P/N 1979AS500-100, consisting of one left and one right riser cover will be sufficient to retrofit the left and right risers of two A/P28S-32(V) parachute assemblies.

a. Remove one new riser cover, P/N 1979AS500-100, from supply package.

b. From top edge of cover with short (4-inch) extension, measure down 14 1/2-in., mark, and sear cut.

c. Using the cut riser cover as a template, lay it over the remaining portion of the cover, mark and sear cut an exact duplicate of the first cover. (There will be excess riser cover remaining that will be disposed of.)

d. At parachute harness sensing release unit riser end, separate front and rear riser. Starting with riser cover end opposite sear cut end, install modified riser cover on each rear riser by mating pile fastener on cover to hook fastener on riser webbing. Ensure the modified riser cover is installed as close as possible to the riser stitching that secures the chaff webbing to the riser loop end. Ensure hook and pile fasteners on modified riser covers and rear risers are mated. Join front and rear riser webbing together.

e. Inspect riser and riser covers to ensure that modified riser covers are mated to the rear risers and the front and rear risers are mated together.

f. Repeat steps a thru e for opposite side riser.

13. REPLACEMENT OF CANOPY BREAKER.

Materials Required

Specification or Part Number	Nomenclature
MS24693-047	Screw
MBEU148009	Breaker
MBEU147592-1	Lid Assembly

a. Remove breaker from damaged headbox lid assembly by removing the two countersunk screws that attach it in place.

b. Obtain new lid assembly and remove pan-head screws from the two holes on top of the lid assembly.

c. Position breaker on top of lid assembly such that the edge of the breaker attachment plate is even with the rear edge of the lid assembly and the holes in the breaker attachment plate are aligned with the holes in the lid assembly.

d. Obtain two screws (MBEU24693-047), insert them in the holes in the breaker attachment plate, and screw them in place tightly with screws fully seated. (QA)

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ORGANIZATIONAL AND INTERMEDIATE MAINTENANCE

ILLUSTRATED PARTS BREAKDOWN

A/P28S-32(V) 1 to 6 PERSONNEL PARACHUTE ASSEMBLY

PART NUMBERS MBEU147710, MBEU147710-1, MBEU147711, MBEU147712, MBEU147713, and MBEU148030

List of Effective Work Package Pages

Page No.	Chg. No.	Page No.	Chg. No.	Page No.	Chg. No.	Page No.	Chg. No.
1	11	2 thru 6	9	7	11		

Reference Material

Intermediate Maintenance, Packing Procedures, A/P28S-32 Personnel Parachute Assembly ..... WP 026 02

Alphabetical Index

List of Figures

Record of Applicable Technical Directives

Type/No.	Date	Title and ECP No.	Date Inc.	Rescission Date
ACC 629	11 Sept 97	SJU-17(V)1-A Canopy Breaker	1 Jun 98	31 Dec 2002

1. INTRODUCTION.

a. This work package (WP) contains information for ordering and indentifying parts for the A/P28S-32(V) 1 to 6 Personnel Parachute Assembly (Figure 1).

2. USABLE ON CODES.

a. The usable on codes in this WP refer to aircraft application for the A/P28S-32(V) 1 to 6 Personnel Parachute Assembly.

b. The following usable on code apply to this WP.

A - F/A-18/C, E and T-45A (Aft)

B - F/A-18D, F (Fwd) and T45A (Fwd)

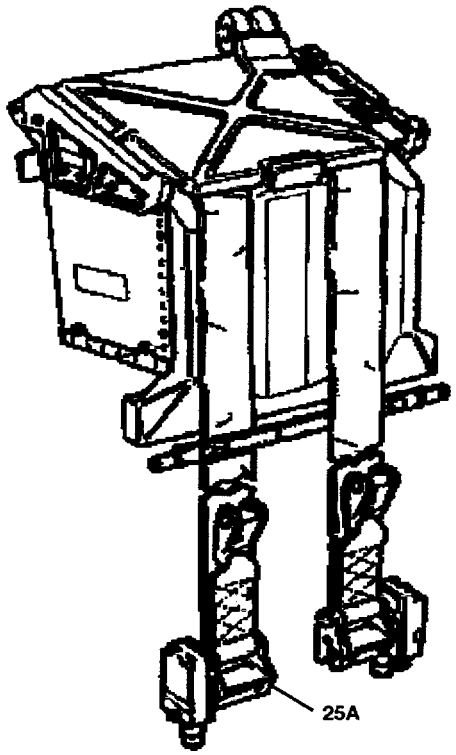
C - F-14D (Fwd)

D - F-14D (Aft)

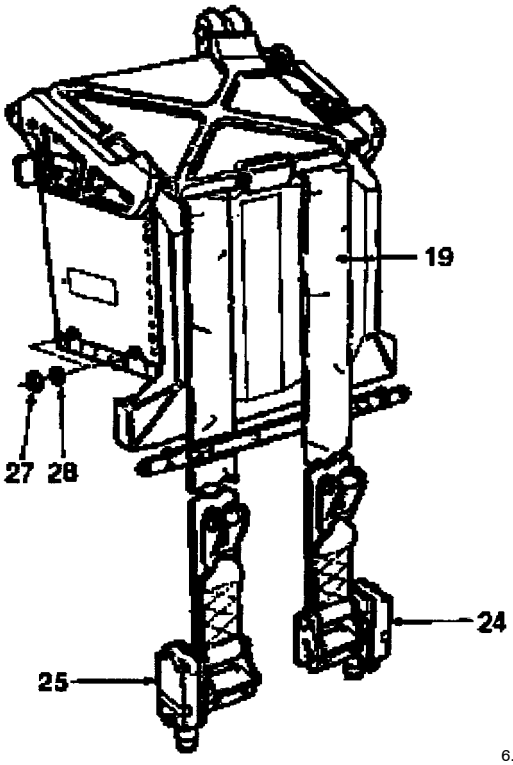
E - F/A-18D, F (Aft)

3. SERVICE/TOTAL LIFE.

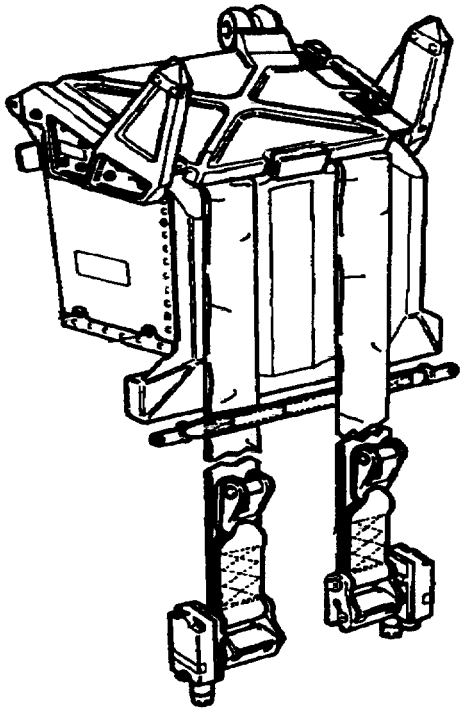
a. The service/total life information is contained in WP 026 02.



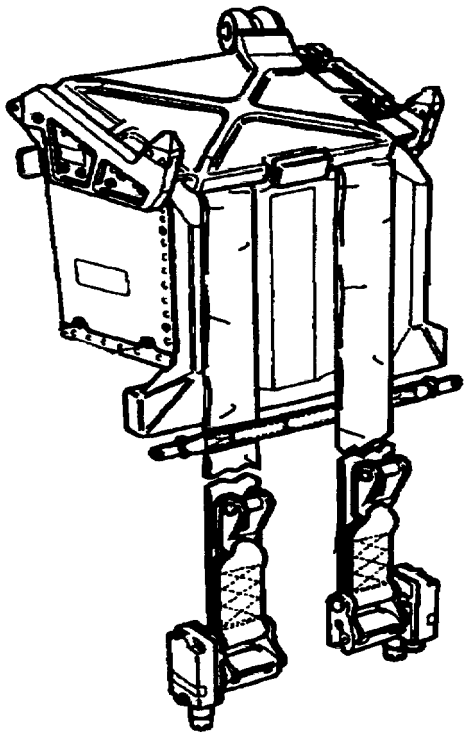
A/P28S-32(V)1 (F/A-18C, E AND T-45A AFT)



A/P28S-32(V)2 (F/A-18D, F FORWARD AND T-45A FORWARD)

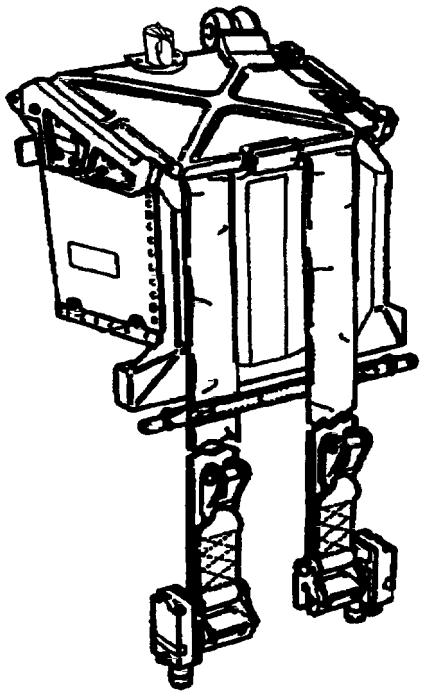


A/P28S-32(V)3 (F-14D FORWARD)



A/P28S-32(V)4 (F-14D AFT)

Figure 1. A/P28S-32(V) 1 to 6 Parachute Assembly (Sheet 1 of 6)



6.2-0719E

A/P28S-32(V)6 (F/A-18D, F AFT)

Figure 1. A/P28S-32(V) 1 to 6 Parachute Assembly (Sheet 2 of 6)

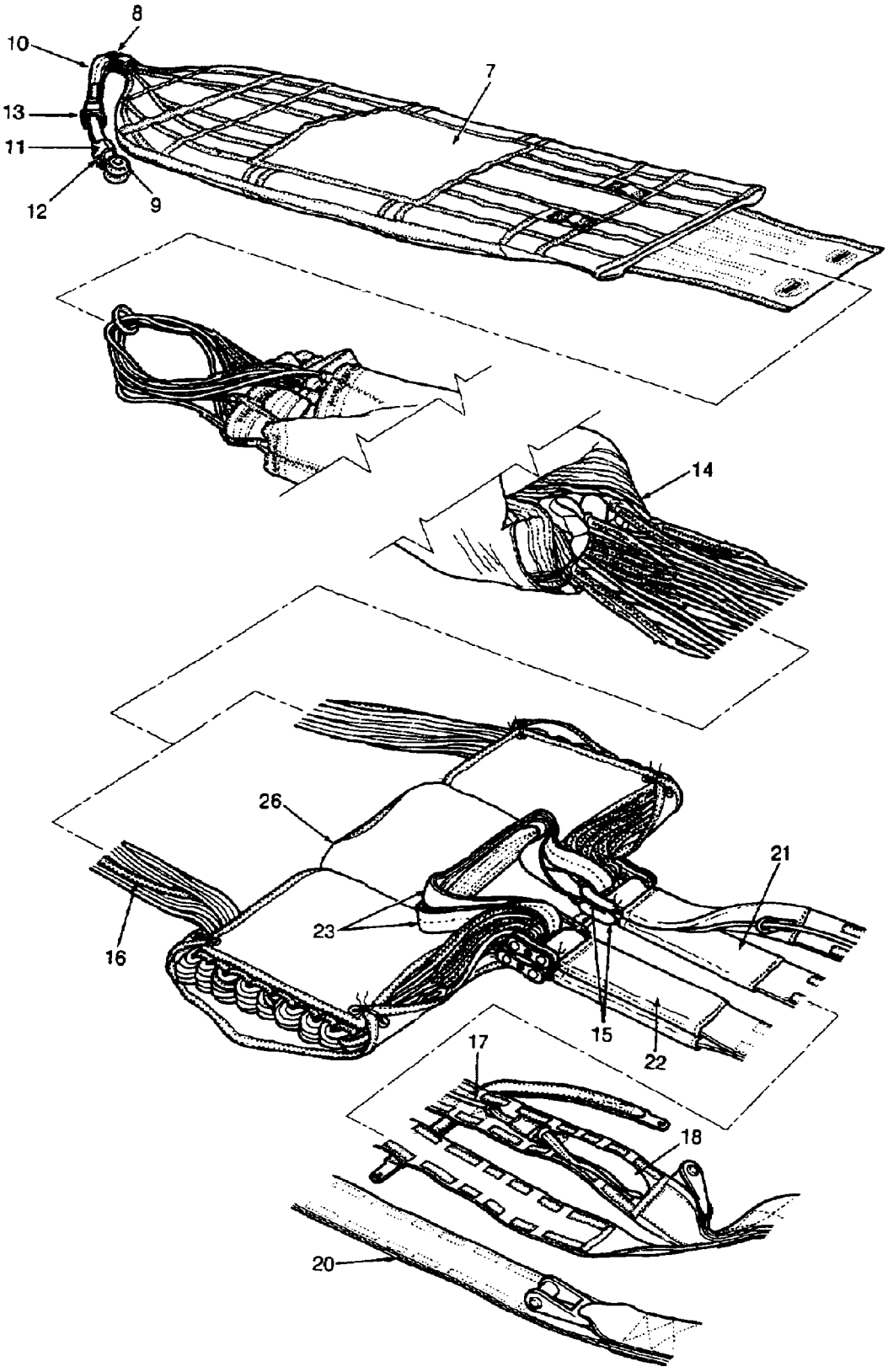


Figure 1. A/P28S-32(V) 1 to 6 Parachute Assembly (Sheet 3 of 6)

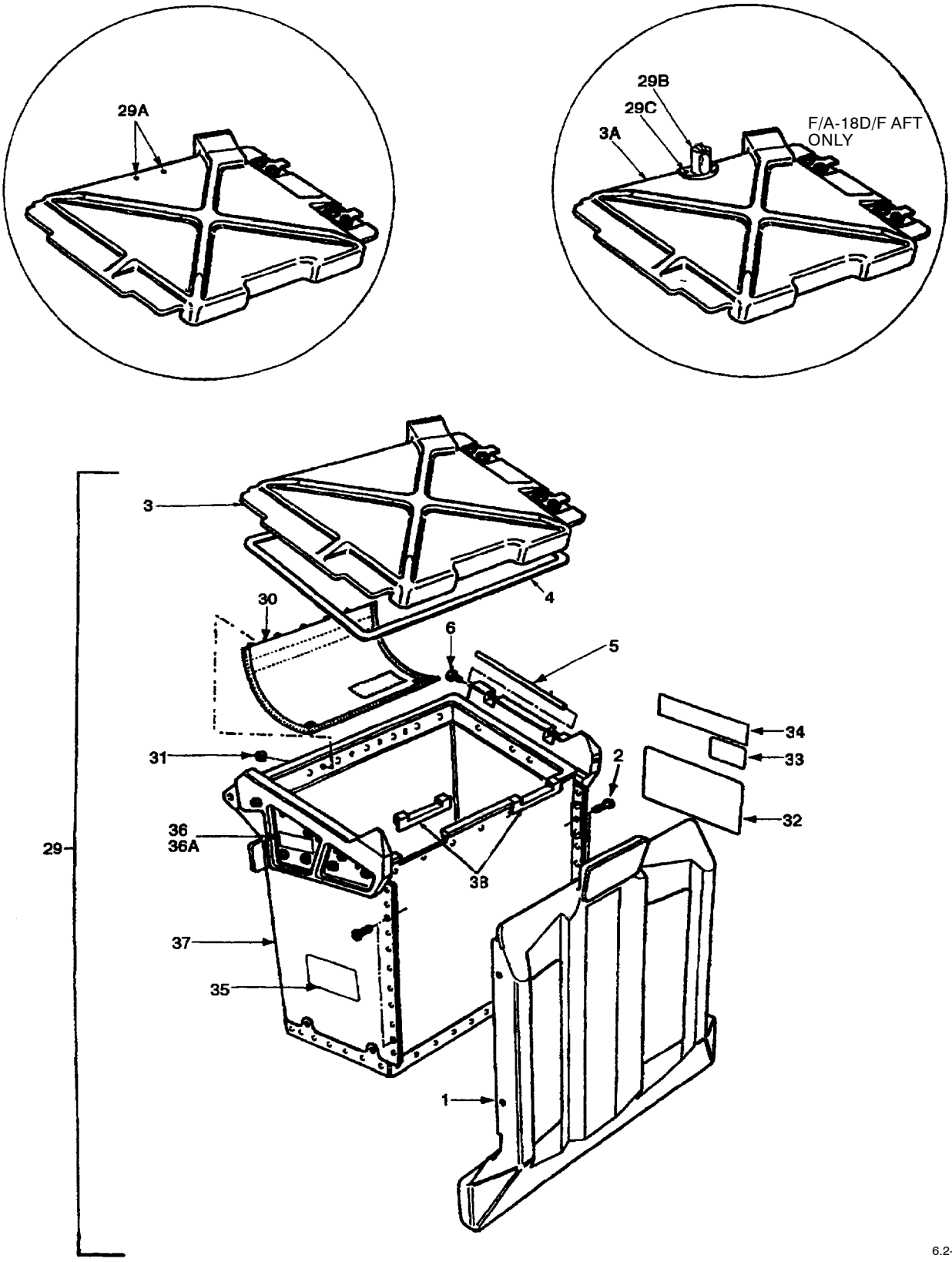


Figure 1. A/P28S-32(V) 1 to 6 Parachute Assembly (Sheet 4 of 6)

INDEX NO.	PART NUMBER	DESCRIPTION 1 2 3 4 5 6 7	UNITS PER ASSY	USABLE ON CODE	SM&R CODE
	MBEU147710	PARACHUTE, PERSONNEL, ASSEMBLY, ... A/P28S-32(V) 1 (30003)	1	A	PDOHH
	MBEU147710-1	PARACHUTE, PERSONNEL, ASSEMBLY, ... A/P28S-32(V) 1 (30003)	1	A	PDOHH
	MBEU147711	PARACHUTE, PERSONNEL, ASSEMBLY, ... A/P28S-32(V) 2 (30003)	1	B	PDOHH
	MBEU147712	PARACHUTE, PERSONNEL, ASSEMBLY, ... A/P28S-32(V) 3 (30003)	1	C	PDOHH
	MBEU147713	PARACHUTE, PERSONNEL, ASSEMBLY, ... A/P28S-32(V) 4 (30003)	1	D	PDOHH
	MBEU148030	PARACHUTE, PERSONNEL, ASSEMBLY, ... A/P28S-32(V) 6 (30003)	1	E	PDOHH
1	MBEU147673	. HEADPAD, ASSEMBLY . . . . . (ATTACHING PARTS)	1		PAOZZ
2	NAS1218-R08E2	. BOLT, PAN HEAD, 8-32 UNC	4		PAOZZ
3	MBEU147592	. LID, ASSEMBLY	1	A, B, C, D	PAHHH
3A	MBEU147592-1	. LID, ASSEMBLY	1	B, C, D, E	PAHHH
4	MBEU147591	. . SEAL	1		PAHZZ
5	MBEU146337	. PIN, LOCKING . . . . . (ATTACHING PARTS)	1		PAHZZ
6	NAS6303-U1	. BOLT, 10-32 UNF . . . . . ---*---	1		PAOZZ
7	MBEU147716	. SLEEVE, DEPLOYMENT, ASSEMBLY	1		PAHZZ
8	MBEU146959	. . RING	1		XAZZZ
9	MBEU142818	. SPOOL	1		PAHZZ
10	MBEU147607	. LINE, WITHDRAWAL	1		PCHZZ
11	MBEU147609	. CLAMP . . . . . (ATTACHING PARTS)	1		PAHZZ
12	MS24693C29	. SCREW, 6-32 UNC . . . . . ---*---	2		PAHZZ
13	MBEU147642	. SEAL	1		PAHZZ
14	MBEU147610	. CANOPY, PARACHUTE, ASSEMBLY	1		PAHHH
	GQ 31420	. CANOPY, PARACHUTE, ASSEMBLY	1		PAHHH
15	MS22021-1	. LINK, REMOVABLE CONNECTOR, ...	4		PAHZZ
16	MBEU147883	. LINE, STEERING, UPPER	2		PAHZZ
17	MBEU147884	. LINE, STEERING, LOWER	2		PAHZZ
18	MBEU147885	. HANDLE, STEERING LINE	2		PAHZZ
19	1612AS201-10	. COVER ASSEMBLY, RISER	2		PAOZZ
20	MBEU147689	. RISERS, ASSEMBLY	1		PAHHH
21	MBEU147692	. . RISER, LH, ASSEMBLY	1		XAHZZ
22	MBEU147690	. . RISER, RH, ASSEMBLY	1		XAHZZ
23	MBEU141488	. . STRAP, CROSS CONNECTOR	2		XAHZZ

Figure 1. A/P28S-32(V) 1 to 6 Parachute Assembly (Sheet 5 of 6)

INDEX NO.	PART NUMBER	DESCRIPTION 1 2 3 4 5 6 7	UNITS PER ASSY	USABLE ON CODE	SM&R CODE
24	852AS117-3	. SENSING RELEASE UNIT PARACHUTE ..... HARNESS MXU-746/P LEFT SIDE	1		AGGGG
25	852AS117-4	. SENSING RELEASE UNIT PARACHUTE ..... HARNESS MXU-747/P RIGHT SIDE	1		AGGGG
25A	990055-1	. . RELEASE ASSEMBLY, CANOPY/99449/	2	*	PAGZZ
	015-10307-5	. . RELEASE ASSEMBLY, CANOPY/99449/ .... (USE UNTIL EXHAUSTED)	2	*	PAGZZ
26	MBEU147599	. TRAY, SUSPENSION LINE, ASSEMBLY ..... (ATTACHING PARTS)	1		PAHZZ
27	NAS679C3MW	. NUT, 10-32 UNF ..... ---*---	4		PAHZZ
28	AGS1186-3	. WASHER, DOWTY	4		PAHZZ
29	MBEU147816	. CONTAINER, PARACHUTE, ASSEMBLY	1	A	PAHHH
	MBEU147816-1	. CONTAINER, PARACHUTE, ASSEMBLY	1	A	PAHHH
29A	MS51957-40	. . SCREW	2		PAHHH
	MBEU147820	. CONTAINER, PARACHUTE, ASSEMBLY	1	B	PAHHH
	MBEU147824	. CONTAINER, PARACHUTE, ASSEMBLY	1	C	PAHHH
	MBEU147828	. CONTAINER, PARACHUTE, ASSEMBLY	1	D	PAHHH
	MBEU148031	. CONTAINER, PARACHUTE ASSEMBLY	1	E	PAHHH
29B	MBEU148009	. . BREAKER	1	E	PAHZZ
29C	MS24693-C47	. . SCREW	2	E	PAHZZ
30	MBEU147765	. . PROTECTION COVER, ASSEMBLY ..... (ATTACHING PARTS)	1		PAHZZ
31	NAS1291-CO8M	. . NUT, SELF LOCKING, 8-32 ..... ---*---	5		PAHZZ
32	MBEU145691	. . LABEL, CHECKLIST (SCOTCHAL)	1		MDOZZ
33	MBEU66468	. . LABEL, ACTUATOR (SCOTCHAL)	1		MDOZZ
34	MBEU66473	. . LABEL, WARNING (SCOTCHAL)	1		MDOZZ
35	MBEU147865	. . LABEL, MODIFICATION (METALCAL)	1		MDOZZ
36	MBEU147576	. . LABEL, IDENTIFICATION (SCOTCHAL)	2	A	MDOZZ
	MBEU147577	. . LABEL, IDENTIFICATION (SCOTCHAL)	2	B	MDOZZ
	MBEU147578	. . LABEL, IDENTIFICATION (SCOTCHAL)	2	C	MDOZZ
	MBEU147579	. . LABEL, IDENTIFICATION (SCOTCHAL)	2	D	MDOZZ
36A	MBEU148032	. . LABEL, IDENTIFICATION ..... (F/A-18D AFT)	2	E	MDOZZ
37	MBEU147817	. . CONTAINER SUBASSEMBLY ..... PARACHUTE	1	A, E	PAHHH
	MBEU147821	. . CONTAINER SUBASSEMBLY ..... PARACHUTE	1	B	PAHHH
	MBEU147825	. . CONTAINER SUBASSEMBLY ..... PARACHUTE	1	C	PAHHH
	MBEU147829	. . CONTAINER SUBASSEMBLY ..... PARACHUTE	1	D	PAHHH
38	MBEU147652	. . . SEAL	2		PAHZZ

Figure 1. A/P28S-32(V) 1 to 6 Parachute Assembly (Sheet 6 of 6)

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